Compliance Assessment Report CAR_NRW0040147

Permit being assessed: BU2349IL. For: Alyn Works, held by Synthite Limited At: Denbigh Road, Mold, Flintshire, CH7 1BF. **Type of assessment carried out:** Site Inspection, Reason: Routine. On 21/06/2022 between 13:30 and 17:25. Parts of permit assessed: See report **NRW Lead Officer:** Lara Cubley, accompanied by Philip Harper. **Report sent to**: Jayme Mountford, Technical Manager on 27/07/2022.

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

Part of permitted activity assessed (criteria)	Assessment result	Permit condition
A1 - Specified by permit	C3 Minor	2.4.1
C4 - General Management - Storage, handling labelling and Segregation	C3 Minor	3.2.3
B1 - Infrastructure - Engineering for prevention and control of emissions	C3 Minor	3.1.1
B3 - Infrastructure - Site drainage engineering (clean and foul)	Action only (X)	
G1 - Monitoring and Records, Maintenance and Reporting - Monitoring of emissions and environment	Action only (X)	

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

Total number of non-compliances recorded	Total non-compliance score
3	12

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
A1	See Actions 1, 2 & 3	30/09/2022
C4	See Action 4	31/10/2022
B1	See Action 5	31/10/2022
B3	See Action 6	31/12/2022
G1	See Action 7	31/12/2022

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.

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

1 Introduction

This Compliance Assessment Report (CAR) records a pre-arranged meeting to discuss recent permit Improvement Conditions (ICs) and monitoring requirement for emissions to air. A site inspection/familiarisation was also conducted by incoming NRW site inspector.

2 Improvement Conditions (ICs)

IC 26, 30 & 31 responses were provided by the Operator on 25/04/22.
NRW considers this to be a breach of Condition 2.4.1 as these ICs were due 06/12/21 and 31/03/22 (A1 - Specified by permit - C3).

ACTION 1: The Operator should review procedures to ensure they enable compliance with IC timescales as required by the Permit.

The above responses to the above ICs were discussed with a summary provided below.

IC26
The Operator maintains a water & ETP manual. The last site water audit was conducted November 2018 and as such the next is due end of the year. KPIs set are as per those required for annual permit reporting.
DCWW test the sewer discharge every 8 days. Results from this provide an update to the waste water inventory.
We didn't have time to review identification of critical equipment and maintenance but this will be followed up during future audits.

IC30
The Operator's response to this IC was very brief and didn't really include, '*procedure(s) describing how it is intended to meet BAT*' in terms of the proposed VOC sniffing methods.
The Operator confirmed that they have now obtained the standard EN 15446 required for sniffing with portable instruments.
This IC requirement has not been completed, is now overdue and does apply to this installation and liquid lines. Advice & guidance relating to the IC requirements was given verbally to the Operator.

ACTION 2: The Operator must undertake necessary actions to complete this improvement condition and submit an adequate response by the newly agreed date of 30/09/22.

IC31

The Operator's response did not address this improvement condition's requirements.

The Operator submitted further information on the 07/06/22 to confirm that daily checks are made on A10, A11 and A12. Fabric filters are replaced annually and the pH of the wet scrubber is monitored.

The second and third bullet point of IC31 are yet to be completed. See page 66 of 'How to comply' How to comply with your environmental permit (cyfoethnaturiol.cymru) - 'monitoring pressure drop across a bag filter or the temperature of a process where these confirm that the emissions will be under control.'

Process monitoring in the form of pressure drop across bag filters should be provided to ensure ongoing efficient operation of abatement to guarantee low emissions. This serves to indicate any malfunctions or issues with abatement in between monitoring episodes and maintenance/bag changes.

ACTION 3: The Operator must complete IC31 and include a timetable for implementation submitted to NRW by 30/09/22.

3 Site Inspection

The following issues were noted during the site walkover.

3.1 IBC Storage

There were several locations across the site pointed out to the operator where IBCs were stored without secondary containment. In one case in the agricultural area an IBC was being stored on an area of soft permeable ground on the boundary of the site. Within the designated IBC storage areas IBCs were stored right up against the kerbing (edge of containment). This does not follow guidance as any damage to primary containers/leaks could be at risk of jetting and loss of containment.

NRW are of the opinion that the above IBC storage breach Condition 3.2.3 of the Permit as secondary containment is not provided (C4 - Storage, handling, labelling & segregation - C3).

ACTION 4: The Operator should review storage of IBCs at the site to ensure adequate secondary containment to enable compliance with the permit . The review should include associated management procedures, training, monitoring and inspection. Please provide a summary of the review findings together with any suggested actions for improvement with timescales by 31/10/22.

3.2 Hardstanding Integrity
There were a number of locations where hardstanding was cracked or extensively eroded so as not to provide a sufficient impermeable barrier to contaminants/pollution. These were pointed out to the Operator during the inspection. One area between the silver plant and non-flammable storage area at the rear of the silver plant had cracks in the hardstanding with significant oil staining and a bucket catching drips of an unknown liquid. There was a sign on the building labelled 'Waste oil'.

NRW are of the opinion that the above breaches Condition 3.1.1 of the Permit in that there are unauthorised emissions to land (B1 - Engineering to control emissions - C3).

ACTION 5: The Operator should review the condition of hardstanding across the site to ensure the integrity is sufficiently impermeable so as to prevent pollution. This review should include associated management procedures, maintenance, training, and monitoring. Please provide a summary of the review findings together with any suggested actions for improvement with timescales by 31/10/22.

3.3 Formox plant Low level alarm
During the inspection a low level alarm with a recorded temperature of 3.4 degrees Celcius was noted in the control room. An explanation of this alarm was not available at the time of the inspection so the Operator was requested to report back without delay. The Operator has responded to confirm as follows, '*When the plant was upgraded in 2005 to allow high inlet operation an additional heat exchanger was include in the upgrade package. The purpose of this heat exchanger was to sub cool formaldehyde solution being exported from absorber T-1 to the tank farm. The process pipework included a bypass around the heat exchanger in case it wasn't needed. The temperature of the product leaving the heat exchanger can be monitored by a thermocouple which provided an operator alarm if the reading was too low, the intended response is that the operator manually adjusted the cooling water flow. We found that with the climate conditions in Mold that we didn't need to operate using the subcooling and the heat exchanger has been bypassed since 2005. The alarm that you observed was the low temperature alarm which was activated because of no product flowing through the heat exchanger due to it being bypassed. The alarm has now been removed by reducing the alarm setpoint.'*

3.4 Hosing of silver plant reflux pot
During the inspection it was noted that a vessel was being cooled by directly applying a hosepipe to the outside. An explanation of this unconventional control method was requested without delay following the inspection . The Operator responded to confirm, '*At the time of your visit one cooling water pump had failed and the operators were unable to start the standby cooling water pump and had contacted maintenance for support. Whilst this was being rectified, they applied external cooling to the distillate vessel to supplement the reduced cooling water flow in the internal coil. The distilled methanol from this vessel is pumped back to the vaporiser and reheated to 42°C, so the reduction in cooling water flow did not increase the operational risk*.'
ADVICE & GUIDANCE: Ensure standby plant is regularly checked and maintained.

3.5 Cooling tower (wooden clad) leakage
Parts of the hard standing yard area have surface run-off cooling water flow from the cooling tower due to limited below-ground drainage systems. This water generally flows via access routes and roadway areas and drains to the effluent treatment plant. It was noted that there was some surcharging of a manhole close to the Ammonia filling shed possibly linked to the flow of this cooling water into the drainage system upstream.
This over-surface flow of cooling water is not a controlled and engineered design. It will increase the risk of deterioration of the hardstanding and increase the risk of pollution resulting in the failure to detect any chemical spills or leaks. During cold snaps there is the risk of ice forming.

ACTION 6: The Operator should review the current arrangements for drainage and provide options for improvements together with costings and timescales to NRW by 31/12/2022.

Some of these issues were picked up in the inspection of the 26/6/19, almost 3 years ago (CAR_NRW0035352) and as such would have expected them to have been satisfactorily addressed.

3.6 Piles of concrete, brick and soils

Some piles of concrete, brick and soils were noted to the South of the site on an area of soft ground towards the lagoons.

ADVICE & GUIDANCE: The Operator should appropriately categorise and dispose of any waste as the Permit does not benefit from the activity of waste storage.

4 Monitoring requirement for emissions to air

The Operator approached NRW and requested agreement under Permit Condition 3.5.4 for the use of cherry picker (Mobile Elevated Working Platform - MEWP) for monitoring to be carried out in relation to emission points A8, A10, A11, A12, A16 and A17.

The Permit requires for a permanent means of access and the newly published version of M1 doesn’t actually now mention the use of MEWPs at all, only permanent and temporary platforms. During the site inspection some of the stacks were observed. NRW sees no reason why a permanent means of access could be provided. For example A12, which currently has a platform regarded as unsafe. This could be made structurally safe and access provided.

ADVICE & GUIDANCE: The site has older plant that wasn’t designed with monitoring in mind. However, permanent solutions do not appear to have been fully investigated and could be implemented over time.

ACTION 7: The Operator shall undertake a full investigation with options and costings for providing permanent means of access at emission points A8, A10, A11, A12, A16 and A17. This review together with suggested improvements with timescales shall be provided to NRW in writing by 31/12/22. Where permanent platforms are not possible, robust reasoning must be provided together with a suitable alternative.

NB: It is the responsibility of the Operator to ensure any monitoring conducted by MEWP meets all health & safety requirements.

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.