

Compliance Assessment Report

Report ID: CAR_NRW0036306

This form will report compliance with your permit as determined by an NRW officer

Site	Morfa Closed Landfill	Permit Ref	AP3292LT
Operator/Permit holder	Tata Steel UK Limited		
Regime	Waste Facility		
Date	7 th February 2020 (followed by revisions on receipt of 2019 annual report)		
Assessment type	Report/ Data Review		
Parts of the permit assessed	2019 Q1 to Q4 quarterly monitoring reports, comment on 2019 annual report		
Lead officer's name	Neil Herbert	Accompanied by	N/A
Recipient's name/position	Yeliz Marshall - Lead Environmental Engineer TATA Safety, Health and Environment	Date issued	2 nd April 2020

Section 1 – Compliance Assessment Summary

This is based on the requirements of the permit under the Environmental Permitting Regulations. A detailed explanation is captured in "Compliance Assessment Report Detail" (Section 2) and any actions you may need to take are given in the "Action(s)" (Section 4). This summary details where we believe any non-compliance with the permit has occurred, the relevant condition and how the non-compliance has been categorised using our Compliance Classification Scheme (CCS). CCS Scores can be consolidated or suspended where appropriate, to reflect the impact of some non-compliances more accurately. For more details of our CCS scheme, contact your local office.

Permit conditions and compliance summary	CCS Category	Condition(s) breached
A1 - Specified by permit	A	
B1 - Infrastructure - Engineering for prevention and control of emissions	N	
B2 - Infrastructure - Closure and decommissioning	N	
B3 - Infrastructure - Site drainage engineering (clean and foul)	N	
B4 - Infrastructure - Containment of stored materials	N	
B4 - Infrastructure – Plant and equipment	N	
C1 - General Management - Staff competency/training	N	
C2 - General Management - Management system and operating procedures	N	
C3 - General Management - Materials acceptance	N	
C4 - General Management - Storage, handling labelling, labelling and Segregation	N	
D1 - Incident Management - Site security	N	
D2 - Incident Management - accidents, emergency and incident planning	N	
E1 - Emissions - Air	N	
E2 - Emissions - Land and groundwater	3	3.1.2
E3 - Emissions - Surface water	N	
E4 - Emissions - Sewer	N	
E5 - Emissions - Waste	N	
F1 - Amenity - Odour	N	
F2 - Amenity - Noise	N	
F3 - Amenity - Dust/ fibres/ particulates/ litter	N	
F4 - Amenity - Pests/birds/scavengers	N	
F5 - Amenity - Deposits on road	N	
G1 - Monitoring and Records, Maintenance and Reporting - Monitoring of emissions and environment	3	3.5.1b (x4)
G2 - Monitoring and Records, Maintenance and Reporting - Records of activity, site diary/journal/events	N	
G3 - Monitoring and Records, Maintenance and Reporting - Maintenance records	N	
G4 - Monitoring and Records, Maintenance and Reporting - Reporting and notification to Natural Resources Wales	N	
H1 - Resource Efficiency - Efficient use of raw materials	N	
H2 - Resource Efficiency - Energy efficiency	N	

KEY: See Section 4 for breach categories, suspended scores will be indicated as such.
A = Assessed or assessed in part (no evidence of non-compliance), **N** = Not Assessed

Number of breaches recorded	5	Total compliance score (see section 5 for scoring scheme)	20
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If the number of breaches recorded is greater than zero, please see Section 3 for our proposed enforcement response

Introduction

NRW have undertaken a partial¹ review of quarterly monitoring reports submitted over the 2019 period. It should be noted that in undertaking this assessment it has become apparent that there is some confusion over the monitoring requirements relating to this permit (including the monitoring for the adjacent Morfa landfills (Hazardous and Non-Hazardous)). This has been communicated already to the operator. It has since been agreed that NRW would complete their assessment of the 2017 HRA submission shortly and changes agreed, the operator would then submit a variation to update the permits monitoring tables. As part of this work the closed landfill permit monitoring table should also be updated.

Our review was initially limited to groundwater results for those locations with a specified emission limit (as identified in table S4.2 of the permit and specified in improvement condition 1) see table below).

We have also attempted to clarify the situation in terms of the recharge trench.

Trigger levels for emissions into groundwater – as outlined in IC 1 (approved) submission					
Monitoring point reference	Parameter	Limit (mg/l)	Monitoring frequency	Reference Period	Monitoring standard or method
1. BH8S and BH8D as shown on drawing reference: Figure 3 Landfill Monitoring Network, Revision 0, 498.1/0/1106	Ammonia	122	Quarterly	-	Unless otherwise agreed in writing with the Agency, monitoring methods used shall be in accordance with Environment Agency document "Guidance on the management of landfill gas. LFTGN03".
	Chloride	27279			
	Calcium	8423			
	Copper	0.036			
	Cadmium	0.003			
	Mercury	<0.0001			
2. BH9D, BH15D and BH16D as shown on drawing reference: Figure 3 Landfill Monitoring Network, Revision 0, 498.1/0/1106	Ammonia	203	Quarterly	-	Unless otherwise agreed in writing with the Agency, monitoring methods used shall be in accordance with Environment Agency document "Guidance on the management of landfill gas. LFTGN03".
	Chloride	4208			
	Calcium	2538			
	Copper	0.009			
	Cadmium	<0.0001			
	Mercury	<0.0001			
3. BH9S, BH15S and BH16S as shown on drawing reference: Figure 3 Landfill Monitoring Network, Revision 0, 498.1/0/1106	Ammonia	2.1	Quarterly	-	Unless otherwise agreed in writing with the Agency, monitoring methods used shall be in accordance with Environment Agency document "Guidance on the management of landfill gas. LFTGN03".
	Chloride	1689			
	Calcium	663			
	Copper	0.012			
	Cadmium	<0.0001			
	Mercury	<0.0001			

Please find attached comments and observations on aspects of the following submitted reports:

Quarterly Monitoring Reports - Q1 (Jan – March 2019); Q2 (Apr-Jun 2019); Q3 (Jul – Sep 2019) & Q4 (Oct – Dec 2019)

Q1 – Groundwater.

Assessment of emission points with set emission limits.

- BH8 – The headworks for this well (which is the only well within the landfill body) has been subject to significant vandalism and is not functional. The operator will endeavour to ascertain whether the well is salvageable however if not it has been agreed that a replacement is not practicable given the difficulty of drilling through the slag wastes. The operator is also confident that the existing monitoring network is sufficient.
- BH9D and BH19S – There are no results for Cd, Hg or Cu in Quarter 1. The results for the other reported parameters are below the limit specified in the permit.
- BH15S and BH15D - There are no results for Cd, Hg or Cu in Quarter 1. The results for the other reported parameters are below the limit specified in the permit.

¹ Primarily groundwater requirements set out in Table S3.3 and leachate levels.

- BH16S & BH16D - There are no results for Cd, Hg or Cu in Quarter 1.
The results for the other reported parameters are below the limit specified in the permit.

Compliance – Q1 Monitoring: The failure to monitor all the parameters required by the permit is a breach of condition 3.5.1b of the permit. However, in accordance with of CCS scoring guidance we have consolidated these breaches into one compliance breach covering the Quarter 1 monitoring period. A CCS score of 3 have been attributed to this breach (g1 compliance heading) - Quarter 1 monitoring period. Condition 3.5.1b (g1) – Quarter 1 – CCS 3

Q2 - Groundwater

Assessment of emission points with set emission limits.

- BH8 – see previous comment
- BH9D and BH19S – The results for the reported parameters are below the limit specified in the permit, however the limit of detection for the cadmium analysis is not sensitive enough to assess compliance and this needs to be addressed.
- BH15S – The cadmium and copper results were above the limits specified in the permit. Other reported parameters were compliant.
- BH15D – The results for the reported parameters are below the limit specified in the permit, however the limit of detection for the cadmium analysis is not sensitive enough to assess compliance and this needs to be addressed.
- BH16S - The copper result was above the limit specified in the permit. Other reported parameters were compliant although the limit of detection for the cadmium analysis is not sensitive enough to assess compliance and this needs to be addressed.
- BH16D - The results for the reported parameters are below the limit specified in the permit, however the limit of detection for the cadmium analysis is not sensitive enough to assess compliance and this needs to be addressed.

Compliance – Q2 Emission Limits: The breach of the copper and cadmium limits at BH15S and BH16S is contrary to condition 3.1.2 of the permit. However, in accordance with of CCS scoring guidance we have consolidated these breaches into one compliance breach covering the Quarter 2 monitoring period. Condition 3.1.2 (e2) – Quarter 2 – CCS 3

Compliance – Q2 Monitoring: The failure to monitor all the parameters required by the permit is a breach of condition 3.5.1b of the permit. However, in accordance with of CCS scoring guidance we have consolidated these breaches into one compliance breach covering the Quarter 2 monitoring period A CCS score of 3 have been attributed to this breach (g1 compliance heading) - Quarter 2 monitoring period. Condition 3.5.1b (g1) – Quarter 2 – CCS 3

Q3 – Groundwater

Assessment of emission points with set emission limits.

- BH8 – see previous comment
- BH9D and BH19S – There are no results for Cd, Hg or Cu in Quarter 3.
The results for the other reported parameters are below the limit specified in the permit.
- BH15S & BH15D – There is no data submitted for this point over quarter 3
- BH16S & BH16D – There are no results for Cd, Hg or Cu in Quarter 3.
The results for the other reported parameters are below the limit specified in the permit.

Compliance – Q3 Monitoring: The failure to monitor all the parameters required by the permit is a breach of condition 3.5.1b of the permit. However, in accordance with of CCS scoring guidance we have consolidated these breaches into one compliance breach covering the Quarter 3 monitoring period. A CCS score of 3 have been attributed to this breach (g1 compliance heading) – Quarter 3 monitoring period. Condition 3.5.1b (g1) – Quarter 3 – CCS 3

Q4 - Groundwater

- BH8 – The headworks for this well (which is the only well within the landfill body) has been subject to significant vandalism and is not functional. The operator will endeavour to ascertain whether the well is salvageable however if not it has been agreed that a replacement is not practicable given the difficulty of drilling through the slag wastes. The operator is also confident that the existing monitoring network is sufficient.
- BH9D and BH19S – There are no results for Cd, Hg or Cu in Quarter 1.
The results for the other reported parameters are below the limit specified in the permit.
- BH15S and BH15D - There are no results for Cd, Hg or Cu in Quarter 1.
The results for the other reported parameters are below the limit specified in the permit.
- BH16S & BH16D - There are no results for Cd, Hg or Cu in Quarter 1.
The results for the other reported parameters are below the limit specified in the permit.

Compliance – Q4 Monitoring: The failure to monitor all the parameters required by the permit is a breach of condition 3.5.1b of the permit. However, in accordance with of CCS scoring guidance we have consolidated these breaches into one compliance breach covering the Quarter 4 monitoring period. A CCS score of 3 have been attributed to this breach (g1 compliance heading) - Quarter 4 monitoring period. Condition 3.5.1b (g1) – Quarter 4 – CCS 3

Reporting

It appears that there are some deficiencies in the quarterly returns which need to be addressed.

These include:

- inconsistent or differing monitoring point identifications – please where possible use the identification used in the permit and please ensure they are applied consistently over each quarter;
- please continue to report wells that are listed on the permit even if lost or damaged (although please state this) – until the well is remediated, replaced or removed from the permit
- the sampling date is not included on the reports, the full date need to be included;
- data is missing for some locations;
- where there has been an emission limit failure the operator should undertake a repeat test immediately (if the sample is still available) and schedule a re-sampling exercise (you should not be waiting for the next monitoring period);
- the operator is repeatedly failing to submit schedule 5 notifications for emission limit exceedances.

Recharge Trench A & B

Recharge Trench A & B - repairs

The recharge trenches have suffered significant vandalism in recent years and are no longer operational. However, given the importance of this mitigation measure the system need to be reinstated. Discussion with the operator in March suggest that it is their intention that repairs to the current system will be undertaken as part of the Non-Hazardous capping works to be completed by December 2021. There may be an opportunity to revise the design of the recharge trench to reduce its vulnerability to vandalism and the operator should start considering any changes in advance of the capping works. The design changes may require agreement with the regulator and may also require some CQA provision. Therefore, early dialogue is encouraged

Recharge Trench A & B – Surface Water Chemistry limits – Pre-operational condition 1

The operator was required (pre-operational condition 1) to submit posed compliance limits for the water discharged from these recharge trenches. There have been several submissions/ correspondences related to this pre-operational condition over the years, either between the operator and the EA or with CCW and now NRW. Due to several reasons, it has been difficult to ascertain whether this condition has been formally discharged however we have summarised below the submissions that NRW now believe relate to this matter and the limits that would now apply (should the trenches be in operation). Action: The operator is required to confirm or otherwise whether the attached limits are correct. Once this confirmation is received, we will formally discharge this pre-operational condition.

Documentation:

- Geotechnology Report - *Recharge Trench Design Targets Report Number 1085r1v1d0811* – Dated: August 2011
- Geotechnology Report - **MORFA CLOSED LANDFILL, PORT TALBOT PERMIT EPR/AP3292LT2014 Annual Review of Environmental Monitoring Results - Report Number 1394r1v1d0315** – Dated March 2015
- Email from Stephen Thomas - Tata to Ffion Thomas NRW From: Thomas, Stephen dated 28 August 2015 14:51

Recharge Trenches A and B – Proposed Control Levels and Compliance Limits

	Control level	Emission level	Control level test	Emission test
	mg/l	mg/l		
Phosphate	0.5	1.0	Control level assessed based on annual average	>Emission level based on quarterly monitoring
Alkalinity	300	350		
Chloride	50	100		
Calcium	>40			
Total Ammonia	0.5	1.0		
Sulphate	100	150		
Electrical Conductivity ²	700 uS/cm	1000 uS/cm		

² It is understood that during discussion between CCW's Gareth Bowen and Tata, the inclusion of an electrical conductivity limit was mooted and agreed, albeit this is not formally documented.

Recharge Trench A & B – Surface Water Levels– Pre-operational condition 2

It is understood that these levels (set out in *Recharge Trench Design Targets Report* – Dated: August 2011) have been informally agreed and were used as the design parameters for the recharge trench that was built in 2014.

If the operator now confirms that the information documented above is correct, then table S4.2. will be amended to reflect these changes – see example below:-

PROPOSED Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
1. Recharge Chamber A as shown on drawing reference: Figure 8 Recharge Trench Alignment Revision 0, Dated 12.07	Water Level	Surface Water Ponds	<i>Upper Level</i> <i>6.50 mAoD</i>	Continuous	24 hour -	
			<i>Mid Level 6.15 mAoD</i>			
			<i>Lower Level</i> <i>5.80mAoD</i>			
			<i>Trench Floor</i> <i>5.75mAoD</i>			
2. Recharge Chamber B as shown on drawing reference: Figure 8 Recharge Trench Alignment Revision 0, Dated 12.07	Water Level	Surface Water Ponds	<i>Upper Level</i> <i>6.50 mAoD</i>	Continuous	24 hour	
			<i>Mid Level 6.15 m AoD</i>			
			<i>Lower Level</i> <i>5.80mAoD</i>			
			<i>Trench Floor</i> <i>5.75mAoD</i>			
3. Recharge Chamber A and B as shown on drawing reference: Figure 8 Recharge Trench Alignment Revision 0, Dated 12.07	<i>Phosphate</i>	Surface Water Ponds	<i>1.0 mg/l</i>	<i>Spot Sample</i>	<i>Quarterly</i>	<i>-</i>
	<i>Alkalinity</i>		<i>350 mg/l</i>			
	<i>Chloride</i>		<i>100 mg/l</i>			
	<i>Calcium</i>		<i>-</i>			
	<i>Total Ammonia</i>		<i>1.0 mg/l</i>			
	<i>Sulphate</i>		<i>150 mg/l</i>			
	<i>Electrical Conductivity</i>		<i>1000 uS/cm</i>			

Conclusion

As noted previously, it is apparent that the current monitoring framework set out in Schedule 4 of this permit (and the equivalent schedules in the sister landfills) need to be reviewed and updated. The operator has been asked to submit a permit application to vary all three permits to update or revise the permit's monitoring schedule. This work is now underway.

2019 Annual Monitoring Report

Whilst this CAR report was being compiled, the operator submitted the 2019 monitoring interpretation report (received February 2020³). We have undertaken a cursory review of this submission.

The report provides a detailed and thorough assessment and trending of the 2019 data collected for the closed landfill. The report make the following specific recommendations:

- Settlement markers need to be maintained with vegetation cut back to ensure identification and access.
- New marker posts should also be installed.
- Vegetation should be routinely cut back to enable safe access to all monitoring locations

NRW comment: The permit requires that all monitoring infrastructure is maintained and if damaged repaired or replaced promptly. Safe access to all monitoring points must always be maintained. These need to be actioned immediately.

³ Extension previously agreed with the operator

The 2019 Annual report also refers to a previous annual report (2017), which included proposed changes to some of the permit's monitoring frequencies (although no changes to the compliance limits were proposed for the closed landfill in the 2017 report). **These have not been accepted by NRW** and any changes will need to be addressed and agreed as part of the forthcoming permit variation exercise.

Permit variation – consolidation

As noted above, the deficiencies in this and the other landfill permits⁴ can only be satisfactorily addressed through a revision and update of all three landfill permits. As part of these variation applications the operator is invited to now consider whether this would be an opportune moment to consolidate the permits.

End of section 2

Note: Novel Coronavirus (COVID -19)

During the compiling of this report 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. These measures to control and reduce the spread and impact of the disease are having an impact on both NRW's and the operator's normal operating practices. At the time of writing all routine regulatory visits have been suspended by the regulator. The situation is dynamic and extremely fluid however these restrictions are expected to remain in place for several weeks if not longer. During this pandemic there will be a continued expectation that operators continue to meet the conditions of their permits. 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 speak to the regulator at the earliest opportunity.

⁴ Morfa Closed Landfill (AP3292LT) – Morfa Non-Hazardous Landfill (BV7311IE) - Morfa Hazardous Landfill (BW2692IM)

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Report ID: CAR_NRW0036306

This form will report compliance with your permit as determined by an NRW officer

Site	Morfa Closed Landfill	Permit Ref	AP3292LT
Operator/Permit holder	Tata Steel UK Limited	Date	7 th February 2020

Section 3 – Enforcement Response

Only one box should be ticked

You must take immediate action to rectify any non-compliance and prevent repetition.

Non-compliance with your permit conditions constitutes an offence and can result in criminal prosecutions and/or suspension or revocation of a permit. Please read the detailed assessment in Section 2 and the steps you need to take in Section 4 below.

Other than the provision of advice and guidance, at present we do not intend to take further enforcement action in respect of the non-compliance identified above. This does not preclude us from taking enforcement action if further relevant information comes to light or advice isn't followed.

In respect of the above non-compliance you have been issued with a warning. At present we do not intend to take further enforcement action. This does not preclude us from taking additional enforcement action if further relevant information comes to light or offences continue.

x

We will now consider what enforcement action is appropriate and notify you, referencing this form.

Section 4 – Action(s)

This section summarises the actions identified during the assessment along with the timescales for when they will need to be completed.

Criteria Ref.	CCS Category	Action required/ advised	Due Date
See Section 1 above			
e2 & g1	3	Action ref 1.0036306 Consolidate and update permit monitoring tables and submit application to vary permit.	No deadline specified at present. To be agreed.
		Action ref 2.0036306 TATA to ensure that all future monitoring submissions: • use correct and consistent monitoring identification • specify the sampling date • submit data for all monitoring points Action ref 3.0036306 TATA to ensure that: • where there has been an emission limit failure the operator should undertake a repeat test immediately (if the sample is still available) and schedule a re-sampling exercise; • schedule 5 notifications are submitted in accordance with the permit.	Immediate (i.e. Quarter 2 (Apr 2020) onwards)
		Action ref 5.0036306 Undertake repairs and vegetation clearance as set out section 2 of this report to enable continual safe access.	Prior to next scheduled sampling exercise and ongoing thereafter.
		Action ref 6.0036306 Tata to confirm that the limits set out in section 2 of this report are correct (relating to the recharge trench limits - pre-operational conditions 1 and 2).	Within 14 days from the issue of this report.
		Action ref 7.0036306 Tata to develop proposals for the repair of the recharge trench. The operator is advised to liaise with NRW in advance of any works to ensure agreement with proposals.	To be submitted either as part of the CQA plan for the capping of the Non Hazardous landfill's bio-cells, or an alternative format to be agreed with the regulator.

If you are unable to meet these deadlines, please contact your inspector immediately to discuss the possibility of extensions.

Section 5 – Compliance notes for the Operator

To ensure you correct actual or potential non-compliance we may

- Advise on corrective actions verbally or in writing
- Require you to take specific actions verbally or in writing
- Issue a notice
- Require you to review your procedures or management system
- Change some of the conditions of your permit
- Decide to undertake a full review of your permit

Any breach of a permit condition is an offence and we may take legal action against you

- We will normally provide advice and guidance to assist you to come back into compliance either after an offence is committed or where we consider that an offence is likely to be committed. This is without prejudice to any other enforcement response that we consider may be required.
- Enforcement action can include the issue of a formal caution, prosecution, the service of a notice and/or suspension or revocation of the permit.

See our Enforcement and Civil Sanctions guidance for further information

Non-compliance scores and categories

CCS category	Description	Score
C1	A non-compliance that could have a major environmental effect	60
C2	A non-compliance which could have a significant environmental effect	31
C3	A non-compliance which could have a minor environmental effect	4
C4	A non-compliance which has no potential environmental effect	0.1

Operational Risk Appraisal (Opra) - Compliance assessment findings may affect your Opra score and/or your charges. This score influences the resource we use to assess permit compliance.

Section 6 – General information

Data protection notice

The information on this form will be processed by the Natural Resources Wales (NRW) to fulfil its regulatory and monitoring functions and to maintain the relevant public register(s). The NRW may also use and/or disclose it in connection with:

- Offering/providing you with its literature/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 its service
- Freedom of Information Act/Environmental Regulations request

The NRW may pass it on to its agents/representatives to do these things on its behalf. You should ensure that any persons named on this form are informed of the contents of this data protection notice.

Disclosure of information

The NRW will provide a copy of this report to the public register(s). However, if you consider that any information contained in this reports should not be released to the public register(s) on the grounds of commercial confidentiality, you must write to your local area office within twenty working days of receipt of this form indicating which information it concerns and why it should not be released, giving your reasons in full.

Customer charter

What can I do if I disagree with this compliance assessment report?

If you are unable to resolve the issue with your site officer, you should firstly discuss the matter with officer's line managers using the informal appeals procedure. If you wish to raise your dispute further through our official Complaints and Commendations procedure, phone our general enquiry number 0300 065 3000 (Mon to Fri 08.00 – 18.00) and ask for the Customer Contact team or send an email to enquiries@naturalresourceswales.gov.uk. If you are still dissatisfied you can make a complaint to the Public Services Ombudsman for Wales. For advice on how to complain to the Ombudsman phone their helpline on 0845 607 0987.

Welsh Language

If you would like this form in Welsh please contact your Regulatory Officer.