

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

Site	Royal Mint EPR/KP3135KV	Permit Ref	KP3135KV		
Operator/Permit holder	The Royal Mint Ltd				
Regime	Installations				
Date of assessment	02/01/2019	Time in	N/A	Out	N/A
Assessment type	Report/Data Review				
Parts of the permit assessed	3.1.2 Emissions to Water; 1.1.1 Management systems; 4.3 Notifications. Site Meeting 21st Jan 2019				
Lead officer's name	Green, Rebecca				
Accompanied by					
Recipient's name/position	Martyn Grant/ Environmental Manager	Date issued	25/01/2019		

Section 1 – Compliance Assessment Summary

This is based on the requirements of the permit under the Environmental Permitting Regulations or the licence under the Water Resources Act 1991 as amended by the Water Act 2003. 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
B1 - Infrastructure - Engineering for prevention and control of emissions	X	
C1 - General Management - Staff competency/training	X	
C2 - General Management - Management system and operating procedures	C3	1.1.1 (a)
D2 - Incident Management - Accidents, emergency and incident planning	X	
E3 - Emissions - Surface water	C3	3.1.2
G1 - Monitoring and Records, Maintenance and Reporting - Monitoring of emissions and environment	A	
G4 - Monitoring and Records, Maintenance and Reporting - Reporting and notification to Natural Resources Wales	C3	4.3.1 (b)

KEY: See Section 5 for breach categories, suspended scores will be indicated as such.

A = Assessed or assessed in part (no evidence of non-compliance), **X** = Action only,

O = Ongoing non-compliance, not scored.

Number of breaches recorded	3	Total compliance score (see section 5 for scoring scheme)	12
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If the Number of breaches recorded is greater than zero, please see Section 3 for our proposed enforcement response

Section 2 – Compliance Assessment Report Detail

This section contains a report of our findings and will usually include information on:

- The part(s) of the permit that were assessed (eg. Maintenance, training, combustion plant, etc)
- Where the type of assessment was 'Data Review' details of the report/results triggering the assessment
- Any non-compliances identified
- Any non-compliances with directly applicable legislation
- Details of any multiple non-compliances
- Information on the compliance score accrued inc.
- Details of advice given
- Any other areas of concern
- Any actions requested
- Any examples of good practice
- A reference to photos taken

On 3rd January 2019 Natural Resources Wales (NRW) received a Schedule 5 Notification that The Royal Mint (RM) had breached the emission limit value (ELV) for chlorine emissions to water, (the River Ely), from emission point W1.

At ~5pm on 2nd January 2019 the free chlorine (Cl) concentration in the sampling point before W1 was measured as 10.4mg/L; the ELV is 0.1mg/L. The concentration of Cl in the River Ely at ~6pm, downstream from the emission point, was found to be 0.11mg/L.

A Cat 3 non-compliance has been issued for a breach of permit condition 3.1.2 for exceeding the ELV for emissions of Cl from emission point W1.

Corrective actions are discussed later on in this report.

NRW were not informed of the breach until ~5pm on 3rd January 2019, which prevented any timely meaningful in-situ assessment of the extent of any environmental harm. NRW's Incident Communication Centre (ICC) did not receive any reports of dead fish in the river.

Permit Conditions 4.3.1 and 4.3.2 state

"4.3.1 The Environment Agency shall be notified **without delay** following the detection of:

- (a) any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution;
- (b) the breach of a limit specified in the permit; or
- (c) any significant adverse environmental effects.

4.3.2 Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule."

NRW should have been informed as soon as the elevated Cl level was discovered, either by telephone or email, given that the incident had the potential to cause environmental harm as well as being a breach of a permit limit. A Cat 3 non-compliance has been issued for the breach of permit condition 4.3.1.

Action 1: Improve training to ensure that all relevant personnel, including management, understand that NRW must be informed of any incident without delay and that, as a minimum, a completed Part A of Schedule 5 must be submitted within 24 hours.

Training to be completed and recorded by 1st March 2019.

In January 2018 the casting furnace was removed from production due to a change in manufacturing methods. There were a number of "knock-on" effects, some of which were considered during the management of change (MOC) process, some consequences were unforeseen and so not considered. RM have a "Haz Study" procedure as part of the MOC process, but it was not used in this case.

A Cat 3 non-compliance has been issued for failure to effectively apply the management of change procedure.

Action 2: Improve management of change procedure so that it reveals and takes into account peripheral effects of any proposed changes which may not have been obvious on first consideration.

Issue modified MOC procedure by 1st March 2019.

SITE MEETING 21st January 2019

Agenda

1. Pre-incident;
2. System operation;
3. Identification of incident;
4. Immediate actions;
5. Root cause/further actions.

Present

KJ, Head of SHE, RM;
JH, Technical Manager MRB & AP&P, RM;
KJ, SHE Graduate, RM;
MW, Mechanical Co-ordinator, RM;
SC, COMAH Manager, RM;
MG, Environmental Manager, RM;
Rebecca Green, PPC Compliance Officer, NRW.

1. Pre-incident & 2. System Operation

The site uses untreated abstracted river water and treated (chlorinated) abstracted river water in many processes. The untreated water is returned to the Ely via the police manhole and W1; the chlorinated water goes to the effluent treatment plant for treatment and discharge to foul sewer via S1. Chlorinated water is only used where there is a risk of legionella, (eg. process water); untreated water is used elsewhere, (eg. some closed cooling systems).

The hypochlorite is dosed into the input lines. There is no automatic monitoring of Cl concentration or demand flows. This water is used in various processes before returning to the Braithwaite tank for use elsewhere on the site. The Cl is sampled twice a day from a smaller tank ~300m away and RM aim for a concentration between just detected and 0.1mg/L.

This was the first plant shutdown and start-up since the casting furnace was removed from production in January 2018. The possible effect of a reduction in the use of cooling water caused by the removal of the casting furnace was not taken into account during the MOC process.

3. Identification of Incident & 4. Immediate Actions

RM were alerted by reports of a smell of Cl coming from the police manhole. The source was traced to the Braithwaite tank which was isolated and mains water substituted for treated river water.

The shutdown meant that demand for treated water was reduced, but the hypochlorite dosing rate had not been changed, causing the Cl concentration in the Braithwaite tank to slowly increase. The Cl concentration is not monitored here.

Action 3: Install monitoring and control mechanism for hypochlorite dosing pump.

System to be operational or an explanation of why it is not by 26th April 2019.

Action 4: Monitor Cl concentration of water leaving Braithwaite tank. If feasible, link outputs to control and alert system. **System to be operational or an explanation of why it is not by 26th April 2019.**

Previously, during shutdown, the cooling tower would have been emptied and refilled and started up before other plant. Any treated water with a high Cl level would have gone to the cooling tower, reducing the volume in the Braithwaite tank allowing it to fill with more water and thus reducing the Cl concentration.

The cooling tower was not restarted until w/c 14th January and so the water with a high Cl level went straight into the process. This would not have been a problem except that a cooling pod pump failed and so Cl treated water was sent to the cooling pods, which discharge through W1.

These events highlight shortcomings in the application of the MOC process which should be addressed by Action 2.

Diversion of treated water to areas that usually use untreated water is a safety mechanism to avoid furnaces exploding. There are alarms which show when the river pumps have stopped working and alarms on the

shop floor to show when the system has automatically changed from using untreated to treated water. Supervisors usually react to the alarms. When treated water is used here it will be discharged via W1; it is very important that the Cl concentration is known so that if it is high the water can be prevented from discharging at W1.

Action 5: Amend operating procedure so that Cl will be analysed when the alarm shows that treated water is being used anywhere that it could be discharged through W1.

Copy of amended operating procedure to be received by NRW before 8th March 2019.

5. Root Cause/Further Actions

The root cause, in NRW's opinion, is the failure to apply the management of change procedure rigorously. Action 2 concerns improving this procedure and the MOC process will be audited by NRW in the first quarter of 2019.

Further actions are detailed above.

This was an unfortunate incident, the result of several coincidences, which could have had a significant environmental effect.

It has highlighted several process weaknesses which RM had not considered or evaluated. Their internal investigation will lead them to examine these shortcomings more thoroughly.

END.

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Section 3 – Enforcement Response

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.

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.

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			
C1	X	Ensure all personnel, including management, understand that any incident must be reported to NRW as soon as possible. The Schedule 5 Notification must be submitted within 24hrs.	01/03/2019
C2	C3	In future, ensure the change procedure is used to evaluate all possible outcomes of any proposed changes.	01/03/2019
D2	X	Ensure that when chlorinated water is diverted for use in sealed cooling systems it cannot be discharged to the river.	08/03/2019
G4	C3	Comply with the requirements of permit conditions 4.3.1 "without delay" & 4.3.2.	18/01/2019
E3	C3	Install control measures to prevent chlorinated water from being discharged through emission point W1.	26/04/2019
B1	X	Install systems to prevent discharge of chlorinated water to the river.	26/04/2019

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

This report does not relieve the site operator of the responsibility to

- Ensure you comply with the conditions of the permit at all times and prevent pollution of the environment
- Ensure you comply with other legislative provisions which may apply

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 (eg. 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 report should not be released to the public register(s) on the grounds of commercial confidentiality, you must write to your local area office within fifteen 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.