

	EPR Compliance Assessment Report	Report ID: KP3135KV/0204221		
This form will report compliance with your permit as determined by an NRW officer				
Site	Royal Mint EPR/KP3135KV/V004		Permit Ref	KP3135KV
Operator/ Permit holder	The Royal Mint Ltd			
Date	24/02/2014	Time in		Out
What parts of the permit were assessed	Schedule 5 - release of dilute (17%) sulphuric acid to groundwater			
Assessment	Report/data review	EPR Activity:	Installation	X
		Waste Op		Water Discharge
Recipient's name/position	Martyn Grant, Environmental Manager			
Officer's name	Rebecca Green	Date issued	17/04/2014	

Section 1 - Compliance Assessment Summary				
This is based on the requirements of the permit under the Environmental Permitting Regulations. A detailed explanation and any action you may need to take are given in the "Detailed Assessment of Compliance" (section 3). 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				Condition(s) breached
a) Permitted activities	1. Specified by permit	N		
b) Infrastructure	1. Engineering for prevention & control of pollution	C3		1.1.1;
	2. Closure & decommissioning	N		
	3. Site drainage engineering (clean & foul)	N		
	4. Containment of stored materials	N		
	5. Plant and equipment	C3		1.1.1;
c) General management	1. Staff competency/ training	N		
	2. Management system & operating procedures	C3		1.1.1; 4.3.1;
	3. Materials acceptance	N		
	4. Storage handling, labelling, segregation	N		
d) Incident management	1. Site security	N		
	2. Accident, emergency & incident planning	N		
e) Emissions	1. Air	N		
	2. Land & Groundwater	C2		3.2.1;
	3. Surface water	N		
	4. Sewer	N		
	5. Waste	N		
f) Amenity	1. Odour	N		
	2. Noise	N		
	3. Dust/fibres/particulates	N		
	4. Pests, birds & scavengers	N		
	5. Deposits on road	N		
g) Monitoring and records, maintenance and reporting	1. Monitoring of emissions & environment	N		
	2. Records of activity, site diary, journal & events	N		
	3. Maintenance records	N		
	4. Reporting & notification	C3		4.3.1;
h) Resource efficiency	1. Efficient use of raw materials	N		
	2. Energy	N		
KEY: C1, C2, C3, C4 = CCS breach category (* suspended scores are marked with an asterisk), A = Assessed (no evidence of non-compliance), N = Not assessed, NA = Not Applicable, O = Ongoing non-compliance – not scored				

Number of breaches recorded	5	Total compliance score (see section 5 for scoring scheme)	47
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If the Total No Breaches is greater than zero, then please see Section 3 for details of 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 (e.g. 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 suspended or consolidated scores.
- details of advice given
- any other areas of concern
- all actions requested
- any examples of good practice.
- a reference to photos taken

This report should be clear, comprehensive, unambiguous and normally completed within 14 days of an assessment.

NIRS incident number: 01213525; CCS number: 213703; RoC number: W/SE/PPC/14/1615

On 24th February 2014, during a gas pipework inspection, a leaking joint was discovered in pipework carrying 17% sulphuric acid in the eastern compressor house. It was estimated that the joint had been leaking for about a week and that approximately 1000L of acid had been lost. The incident was reported to Natural Resources Wales (NRW) using a Schedule 5 form on 26th February 2014. This does not comply with the permit requirement to report such incidents within 24 hours.

The leak was mended immediately and an internal investigation (5 Why) began on 27th February. NRW were advised of the outcome of this meeting on 28th February. It identified 10 actions, but did not mention the late reporting.

Royal Mint were asked to measure the pH in boreholes adjacent to the incident as a matter of urgency. Any significant reduction in pH in these boreholes would indicate that the acid had seeped into the ground where there is known historical heavy metal pollution. A reduction in pH of the groundwater could result in the dissolution of these heavy metals and subsequent transport to and pollution of the nearby river. Royal Mint were also asked to measure the pH and heavy metal content of the river upstream and downstream of the entry point of the culverted stream into the river.

The initial pH measurements on 4th March 2014, when compared with those taken during routine monitoring around the NP1 remediation area on 31st January 2014, showed a significant reduction in pH. In BHE1 pH reduced from 9.44 to 6.19, in BHE2 it reduced from 8.45 to 6.45, in BHE3 it reduced from 7.94 to 6.64 and in BH26 it reduced from 9.61 to 6.29. Other boreholes and the river monitoring points did not show a reduction in pH. Since pH is measured using a logarithmic scale, a decrease of three units represents a 1000 fold increase in acid strength. This is a significant increase and could result in dissolution of any heavy metals present in the ground. pH measurements taken at the same points on 31st March 2014 showed that pH values were starting to increase, inferring that the acid plume was becoming diluted. However, pH values taken at some river monitoring points on 31st March 2014 (SWA, SWO and SW1) showed a decrease of ~0.4pH units. Two of these were upstream of where the culverted stream under the site enters the river and so it is assumed that these changes are probably due to influences outside of The Royal Mint's control.

Samples from the same monitoring points were taken on 4th March and 31st March 2014 and analysed for heavy metals (copper, Cu, nickel, Ni and zinc, Zn). Results for monthly monitoring from 25th October 2013 to 31st March 2014 were provided by The Royal Mint so that any trends could be seen and any increases in heavy metal concentrations interpreted realistically. Ni in BHE4 increased from 160ug/L on 31st Jan to 250ug/L on 4th March then reduced to 59ug/L on 31st March. In BHE5, Ni increased from 14 to 32 then decreased to 1ug/L. Cu increased very slightly in BHE1 and BH26 and Zn increased from 58ug/L on 4th March to 71ug/L on 31st March. It is more difficult to interpret the results from the surface water monitoring points as there was a very high Ni concentration of 830ug/L at SWA (upstream of the site) on 25th November 2013. Any mobilised heavy metals would also take longer to reach the river as they have to travel

through the ground first. There were increases in Ni levels at SWO, SW1, SW2 and SW3 when the results for 31st January were compared with those for 4th March, but all except SW1 had decreased to less than 1ug/L by 31st March. Given the water flux, it is unlikely that these increases, except for that at SW1, were due to the sulphuric acid leak. Ni concentration at SW1 increased from 4.9ug/L on 31st January to 8.3ug/L on 4th March and increased again to 120ug/L on 31st March. SW1 is near the river entry point of the culverted stream, so this may have aided the transport of Ni from the leak site to the river.

This incident would have been prevented if The Royal Mint had had suitable equipment design and maintenance procedures in place at the time. The failure to inform NRW within the specified 24 hours is also a serious matter. The Royal Mint have been most helpful throughout this investigation.

Actions

Ten actions were identified by The Royal Mint following their internal "5 Why" investigation. NRW agrees that these actions and the proposed timescales are appropriate.

The Royal Mint should continue to monitor boreholes BHE1-6, BH26 and river monitoring points SWO, SWA and SW1-4 for pH and Ni, Cu and Zn on a monthly basis, reporting the results to NRW as soon as they are available.

In addition, at the request of The Royal Mint, NRW will provide training in completion and submission of the Schedule 5 form by 30th June 2014.

All other actions proposed by the Royal Mint and their completion dates are given in section 4 of this report.

END.

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Operator/ Permit	The Royal Mint Ltd	Date	24/02/2014

Section 3- Enforcement Response	Only one of the boxes below 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)			
Where non-compliance has been detected and an enforcement response has been selected above, this section summarises the steps you need to take to return to compliance and also provides timescales for this to be done.			
Criteria Ref.	CCS Category	Action Required/Advised	Due Date
See Section 1 above			
B1	C3	Instigate and document regular inspection of all pipework carrying hazardous materials around the site.	27/05/2014
B5	C3	Ensure existing plant and all proposed new plant is assessed for chemical compatibility with the materials it is likely to hold or be in close proximity to. Provide procedure and documentary evidence of assessment.	31/03/2014, ongoing
C2	C3	Ensure maintenance procedures identify need to take into account the effect any operations may have on nearby equipment. Update documentation.	31/03/2014, ongoing
E2	C2	Inspect all interceptors near areas where a chemical spill or leak could happen. Determine whether repair or sealing off is appropriate and act accordingly.	30/04/2014
G4	C3	Ensure deputies for Environmental Manager are aware of their responsibilities to report any incidents to NRW within 24 hours.	31/03/2014

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 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 which 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 fulfill 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 and taking any resulting action
- preventing breaches of environmental law
- assessing customer service satisfaction and improving its service
- Freedom of Information Act/Environmental Information 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 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 the officer's line managers. 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.