Johnson Matthey
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07th February 2025

Attention: Catherine Harvey
c/o Permitting & Support Centre
Quadrant 2
99 Parkway Avenue
Parkway Business Park
Sheffield S9 4WF

Your Ref: CRM:0822150

RE: Response to Request for Information

Dear Catherine,

Please find our responses to the questions asked in your email dated 24th January 2025 for permit variation application EPR/BT7086IJ/V17.

For ease of reference, the Environment Agency questions are stated in bold text with the response provided in normal text.

1. **Application form Part A, 5c**

   We do need to confirm the details of the company directors and secretary for this variation. We therefore need you to provide the names of all current company directors and the secretary and a contact email address for the secretary.

   Response: Please refer to the attached document Johnson Matthey Board of Directors providing a list of Directors for Johnson Matthey

2. **Application form Part C2, 1b**

   The permit number stated does not appear to be correct. We therefore need you to update and resubmit this form.

   Response: This has been corrected. Refer to 416.065394.00001 Part C2 Revised

3. **BATOT section 3.6.1.1**

   We need you to demonstrate that the emergency diesel generators will meet the best available techniques set out in our guidance, which will include submitting copies of the engine specification sheets. Please see our guidance for further information: Emergency backup diesel engines on installations: best available techniques (BAT) - GOV.UK

   Response: I have attached the engine Manual and the Generator Load test certificate which shows that the kVA achieved for the generator as 720. This will mean that the

thermal rated input of the generator that can be achieved is 0.774 MWth below the original stated thermal input of 1.12 MWth in the permit application. This would mean MCP is not applicable as it is below the MCP applicable threshold of 1MWth.

Calculation of thermal Rated Input

The thermal rated input has been calculated from the KVA (kilovoltAmps rating), as the thermal rated input could not be identified from the information provided by site Calculations are sourced from the AMP Technical Committee (AMPS-Guidance-for-determination-of-thermal-input-power-of-generators-.pdf)[1]:

Generator set ratings are often quoted in KVA at a 0.8 power factor. Where this is the case electrical power is determined by:

Pe(r) = KVA * 0.8

Where Pe(r) = Rated electrical power (KW)

KVA = kiloVoltAmps rating

KVA = 720/0.8 = 900 (0.9 MVA)

The calculation for MWth derived from MVA output is based on a power factor 0.8 and a conversion efficiency of 0.93 for MWth to MWelec.

- 0.9 MVA = (0.9*0.8)/0.93 = 0.774 MWth.

4. BATOT section 4.0

We need you to:

(a) Identify the specific catalysts that will be produced within the HomCat expansion.

(b) Confirm that the application's risk assessment has considered a worst-case environmental impact of these specific catalysts, or provide updated documents accordingly.

(c) Resubmit the 'Confidential Sections of HomCat BAT-OT' document and any other relevant documents, updated to reflect the specific catalysts that will be produced.

Response:
4(a) – The specific catalyst to be produced have been detailed under Process Description for the HomCat Confidential Sections Document included in this response. The specific HomCat Catalyst to be produced are Pd-118 and Pd-132 Palladium catalysts

4(b) – The application risk assessment has considered the worst case of the VOC to be emitted from the plant.

4 c) – Refer to HomCat Confidential Sections Document

5. BATOT section 6.0

We need you to:

(a) Confirm exactly what the annual quantity of 5000 kg is referring to. For example, whether this is the amount of each additional waste code that will be

accepted, or the total amount of the additional waste codes together, or something else.

(b) Confirm whether all the waste accepted under the proposed waste codes is waste related to products that have been manufactured at the Royston site.

(c) Provide more detail about the type of waste that will be accepted under waste code 12 01 04, to include identification of the non-ferrous metal that will be present.

(d) Provide the criteria and/or specifications that the wastes under each waste code must meet to be accepted on-site.

Response:
5(a) We confirm that the 5000kg requested covers the total existing waste streams which JM Royston (Noble Metals) already accept under local agreement.

5(b) We can confirm that all proposed waste codes relate to products that have been manufactured at the JM Royston site.

5c This EWC classification relates to dusts and particles arising from the customer use of JM Noble Metals products which do not have a catalytic purpose. For example, wires or components in thermocouples used for their thermal properties or precious metals components, or precious metals coated components used for their chemical or mechanical properties. Other non-ferrous metals present may include precious metals (platinum, palladium, rhodium, ruthenium, or iridium) and Aluminium, See Table

5d

EWC	WM3 Classification	Criteria / Specification
10 07 04	wastes from silver, gold and platinum thermal metallurgy - other particulates and dust	Precious metal particulates or dust from spent or damaged precious metal components from manufacturing process used for chemical, mechanical or thermal properties and not for catalysis. Can include machined or coated mechanical devices, stirrers, plungers, Danner sleeves .
10 07 99	wastes from silver, gold and platinum thermal metallurgy - wastes not otherwise specified	Spent or damaged precious metal components from manufacturing process used for chemical, mechanical or thermal properties and not for catalysis. Can include machined or coated mechanical devices, stirrers, high end electronic industry components.
10 11 99	wastes from manufacture of glass and glass products - wastes not otherwise specified	Wastes containing precious metals including; components used in manufacturing processes for chemical, mechanical and thermal properties e.g. stirrers, plungers, Danner sleeves
12 01 04	wastes from shaping and physical and	dusts and particles arising from the customer use of JM Noble Metals products which do

	mechanical surface treatment of metals and plastics - non-ferrous metal dust and particles	not have a catalytic purpose. For example wires or components in thermocouples used for their thermal properties or precious metals components, or precious metals coated components used for their chemical or mechanical properties. Dusts will mainly be precious metals (platinum, palladium, rhodium, ruthenium, or iridium), but may contain non-ferrous metals including aluminium, chromium and nickel below hazardous threshold.
16 08 01	spent catalysts - 16 08 01 spent catalysts containing gold, silver, rhenium, rhodium, palladium, iridium or platinum (except 16 08 07)	For receipt of spent catalyst products containing precious metals including platinum, palladium, rhodium, ruthenium, or iridium. Catalysts may be solid form – woven wire gauzes.

6. BATOT sections 3.4.7 and 4.4.7

Response: No longer required

7. Air Quality Assessment (dispersion modelling report)

Following completeness checks, we need you to provide the following information:

(a) The actual oxygen and moisture values used to calculate the normalised volume flows for sources A8a, A8b, A13, A15 and A16.

(b) An explanation as to why the stack diameters in the model and report do not match the diameters in the monitoring reports for Q2, Q3 and Q4 2023, except for A228.

(c) The chlorine emission concentration used to calculate the emission rate for the new sources A101 and A102. I believe this is included in the dispersion model data spreadsheet that has been submitted, but please can you confirm since this has been specifically requested.

(d) Contour maps for NH3 and nitrogen deposition because of potential exceedances identified by the consultant.

Responses

4(a) The actual oxygen and moisture for the CHP are provided in the emission monitoring reports provided as part of the original submissions. I have provided sample actual results in the below table:

Stack Ref	Report Reference	Actual Oxygen,%	Actual Moisture,%
A8a	EMT07608 8a CHP1	9.7	7.42
A8b	EMT07608 8b CHP2, Nov 2023	10	7.39
A13	EMT02646 A13 Boiler 1, Feb 2022	5.8	5
A15	EMT02646 A15 Boiler 2, Feb 2022	5.8	5
A16	Out of use for the monitoring period	5.8	5

4b – The modelled sampling diameters were compared to those in the monitoring reports, revealing slight variances in 13 out of 23 cases. After consulting with our monitoring consultants and the onsite team, we identified two potential causes for these variances:

Measurement Techniques: The internal sampling diameter is measured by inserting a device into the stack and then the measurement is taken. This methodology has a margin of error which can result in slight differences in the measurement due to the cylindrical nature of the stack and the angle of insertion.

Measurement Approximations: Variations may occur due to different approximations made by monitoring contractors and the onsite when collating the measured data for modelling.

In the modelling data, 10 out of the 13 sampling diameters are slightly larger than those in the monitoring report, with differences ranging from 1 cm to 8 cm. This suggests that the estimated mass release has been overestimated in our model, making the modelling data worst case scenario.

The internal diameter for stack A27 (0.6m) and A35 (0.3m) used in the modelling data are accurate according to previous reports and the P&ID for stack A27. We believe the 0.8m and 0.4m diameters for A27 and A35 respectively could be an error. We have asked the monitoring contractor re-measure all the sampling internal diameters and this will be check again against the P&ID for the stacks.
In conclusion, the sampling diameters used in the modelling data overestimated the mass emission representing the worst-case scenario for emissions for the site.

4c – Yes, this has been used in the dispersion modelling

4d – Refer to FM1472_JM_CERC_A1_03Feb25(002) Contours Maps

8. Noise Impact Assessment (NIA)

We need you to provide the noise modelling files used to predict the specific sound levels within the report. Where there are multiple models, clearly label each model or provide a description of each model alongside the files. We note that the NIA refers to CadnaA modelling, so please provide the CadnaA project files (.cna file format).

Response: Included as JM Noise Models

9. **Enhanced pre-application advice request reference EPR/BT7086IJ/P001**

We have been unable to locate the payment made for this request, which is linked to this application. We cannot duly make this application until we have confirmed that this payment has been received. We need you to provide the date this payment was made and any reference or additional proof of payment that you have.

Response: The invoice for this was received on 5th February 2025. I have instructed finance to proceed with payment. Payment reference is **EPR/BT7086IJ/P001**

Additional Questions

1. **In relation to the 'Confidential Sections in the Site Condition Report (SCR) Addendum' document, we believe that confidentiality is being requested for the text highlighted green. Please confirm that this is the case and provide an updated copy of the 'Site Condition & Baseline Report Addendum - 3CR Annex' document that includes the text that is not highlighted green, for which we believe confidentiality is not being claimed.**

Response:
Table D-1 Relevant Hazardous Assessment and E.1 Containment Assessment which confidentiality is being sought for in the SCR Report Addendum -3CR Annexe have been included as Confidential Sections in the Site Condition Report (SCR) Addendum Document.

2. **In relation to the 'Confidential Sections of HomCat BATOT Assessment' document, we note that section 4.4.5 'Waste Gases' is also included in the public register version of the BATOT document. Please therefore provide an updated version of one of these documents. Please note that we cannot agree confidentiality for any information relating to emissions.**

Response: This has been amended refer to Confidential Sections of HomCat BATOT Assessment document.

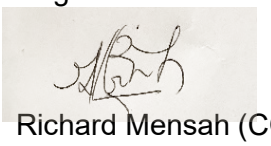
3. Confidentiality has been requested for the Air Emission Modelling Data and Reports. Please confirm this and provide a justification or submit an updated confidentiality request letter. Please note that we cannot agree confidentiality for any information relating to emissions.

Response:

Confidentiality for the Air Emission data and reports have been removed from the application see revised confidentiality request.

I trust that the documents submitted will provide you with the information you require to progress determination of the application. If you have any questions regarding the information provided in this response, please contact me and I would be happy to discuss it further with you.

Regards



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