

Mr S Alder
IQE Europe Ltd
Pascal Close
St Mellons
Cardiff
CF3 0LW

Our ref: PAN-001213

Your ref:

Date: 1st February 2017

Dear Mr Alder

We need more information about your application

Application reference: EPR/KP3235SS/V003

Applicant: IQE (Europe) Limited

Facility: St Mellons Semiconductor Plant, Pascal Close, St Mellons, Cardiff, CF3 0LW.

Thank you for your application received on 13th January 2017.

I need to ask you for some more information before I can decide whether it is duly made or not. The information required is summarised below:

Application Form C2

Q6 (Environmental Risk Assessment)

Ecological risk screening assessment

Section 3.1.5 of the Atkins BAT Appraisal document makes reference to the Gwent Levels SSSI, but does not include any other nearby ecological receptors. We have verified the sensitive ecological receptors within the relevant screening distances for an installation with releases to air, by undertaking the relevant searches using our own NRW mapping systems. The results of this search are listed below:

There are two European site within 10km of release point A1:

- River Usk / Afon Wysg (Special Area of Conservation)
- Severn Estuary (Wales) (Special Area of Conservation, Special Protection Area and Ramsar site)

There are two SSSIs within 2km of release point A1:

- Gwent Levels – St. Brides
- Gwent Levels – Rumney and Peterstone

There are 25 non-statutory sites within 2km of release point A1:

- Cath Cobb Wood (Local Wildlife Site)
- Druidstone Road (Local Wildlife Site)
- Hendre Lake West (Local Wildlife Site)

- Marshfield (Local Wildlife Site)
- Tyla Farm Wood (Local Wildlife Site)
- 25 x ancient woodland sites

Please update the H1 Software tool to include screening for these habitats sites against relevant critical levels set for the protection of vegetation and ecosystems and any relevant critical loads. The parameters which need to be included in this ecological screening assessment are: nitrogen oxides (as NO₂) (proposed for release from the thermal oxidizer) and ammonia. In addition, the air dispersion modelling files and associated technical note (referenced in the Atkins document entitled “IQE Redevelopment: BAT Appraisal (including Thermal Abatement)”) will need to be updated if the H1 screening criteria for PCs and PECs cannot be met.

Human health screening assessment

The H1 software tool includes screening for releases of chlorine and ammonia to air, but does not include nitrogen oxides (as NO₂) or carbon monoxide which are proposed to be released from the thermal oxidizer.

Please update the H1 Software tool to show both the Process Contribution (PC) and Predicted Environmental Concentration (PEC) for the human health parameters listed above. In addition, the air dispersion modelling files and associated technical note (referenced in the Atkins document entitled “IQE Redevelopment: BAT Appraisal (including Thermal Abatement)”) will need to be updated if the H1 screening criteria for PCs and PECs cannot be met.

Guidance on how to complete an air emissions risk assessment is available on the gov.uk website at the following link:

<https://www.gov.uk/government/collections/risk-assessments-for-specific-activities-environmental-permits>

This more detailed data described above is required in order to verify if the variation type applied for is correct. Therefore it is important that the PCs and PECs for all parameters are shown. When the updated screening assessment is complete, please provide Reference 8 “Technical Note – Air Quality Assessment” and the electronic AERMOD PRIME modelling files which underpin the conclusions presented in the Atkins BAT Appraisal document and any subsequent updates to these conclusions.

Application Form C3

Table 1a – Types of activities

Please confirm the net rated thermal input of the thermal oxidizer in megawatts. This information is required in order to verify whether or not this is a listed activity under Schedule 1, Part 2 of the Environmental Permitting (England and Wales) Regulations 2016.

Table 3c – Types and amounts of raw materials

Section 2.2.1 of the Atkins document entitled “IQE Redevelopment: BAT Appraisal (including Thermal Abatement)” states that “The new Aixtron G5a production tool uses ammonia and a dopant gas (low concentration silane), along with trimethyl gallium, hydrogen and nitrogen passed over the wafer at elevated temperatures in a batch process that lasts a number of

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hours". Whilst Table 3c gives the required data for anhydrous ammonia and chlorine gas, it does not include maximum amounts, annual throughput or a description of any main hazards for the silane gas, trimethyl gallium, hydrogen and nitrogen. Therefore please submit an updated copy of table 3c to include this additional information.

Guidance on preparing an Environmental Permit application is provided on our website at <https://naturalresources.wales/apply-for-a-permit/installations/?lang=en>. Please reply within 10 working days from the date of this letter. If we don't hear from you we must return your application and fee.

If you email or write to us please quote the application reference EPR/KP3235SS/V003 on any correspondence and send it to the relevant address below. When we receive the missing items we will continue to check the details in your application. If there's enough for us to begin the process of deciding whether or not we can grant your application we say the application is 'duly made' and we'll let you know this by letter.

If you have any questions please phone me on (03000) 654358 or email anna.lewis@naturalresourceswales.gov.uk.

Yours sincerely



Anna Lewis
Principal Permitting Officer

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