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Bwrdd Iechyd Prifysgol
Caerdydd a'r Fro
Cardiff and Vale
University Health Board

Ysbyty Athrofaol Cymru
University Hospital of Wales
UHB Headquarters

Heath Park
Cardiff, CF14 4XW

Parc Y Mynydd Bychan
Caerdydd, CF14 4XW

Eich cyf/Your ref:
Ein cyf/Our ref:
Welsh Health Telephone Network: 1872
Direct Line/Llinell uniongychol

Fiona Kinghorn, Interim Director of Public Health
Phone: 029 2074 8886 Ffon: 029 2074 8886

Your Ref: WPCC5426
Our Ref: B8BY610

22nd December 2016

Ms Victoria Seller
Permitting Officer
Natural Resources Wales
Wales Permitting Centre (Cardiff)
Cambria House
29 Newport Road
Cardiff
CF24 0TP

Dear Ms Seller

Environmental Permitting (England and Wales) Regulations 2010
Application for a wood gasification facility at Woodham Road, Barry, CF63 4JE.

We welcome the opportunity to comment on this permit application. This assessment is based on actual or potential health risks from environmental exposures to chemicals, noise from the proposed operations including emergencies and extreme environmental events such as flooding. We have consulted with our colleagues at the Environmental Public Health Service (delivered collaboratively through Public Health Wales' Health Protection Team and Public Health England's Centre for Radiation, Chemical and Environmental Hazards Wales).

Any recommendations are for consideration by the Regulator and be reflected in any permit conditions made (see rationale below).

Proposed Operations

The applicant proposes to operate a renewable energy generation facility to recover energy from 86,400 tonnes of pre-prepared mixed waste wood feedstocks using gasification. The combustion process will raise steam to generate electricity up to an export capacity of 10MWe. Combustion gases will be subject to flue mitigation to control emissions. The treatment process will be permitted by Natural Resources Wales as a Waste Incineration Activity and will be operated in accordance with the Environmental Permitting Regulations.

The application site is located within Barry Port at the centre of an industrial and commercial area. The site extends in area to 0.77ha (1.86 acres). The nearest residential development is located on Dock View Road to the north and at a distance of 370m.

Overall Conclusion

We have no grounds for objection based upon the public health considerations contained within the application; however we make the following recommendations;

- The applicant has not submitted its consideration of transport emissions within this application. The regulator should be satisfied that the operation will not result in adverse air quality impacts as a result of vehicles servicing the site.
- The vicinity of the proposed plant has been the subject of many development proposals. The regulator should be satisfied that the applicant has considered the cumulative emissions to air of the development in conjunction with other consented schemes in the vicinity likely to be operational during the life of the plant.
- The applicant should seek external accreditation (to ISO 14001 or equivalent) for its Environmental Management System.
- The regulator should seek assurances that the recommended acoustic mitigation strategies are employed prior to operation of the plant.

Public Health Risk Assessment

The applicant has undertaken an air quality impact assessment to consider the impact of the emissions from the plant. The long-term maximum off-site concentrations of nitrogen dioxide (NO₂) as a result of the plant (0.75 µg/m³) and the existing environmental concentrations are predicted to be 20.75 µg/m³ (52% of the air quality objective), as such impact can be described as negligible. The short-term impacts of NO₂ will lead to a process (22.1 µg/m³) and environmental concentration of 62.1 µg/m³, as such the increase can be described as negligible.

The assessment has considered relevant pollutants (carbon monoxide, particulate matter, sulphur dioxide, dioxins and furans, volatile organics and metals) and concludes that the impact of the proposed development is negligible.

The supporting human health risk assessment compares the emissions of dioxins, furans and dioxin like PCBs against the tolerable daily intake (TDI) (the amount of a substance that can be ingested daily over a lifetime without appreciable health risk). It is expressed in relation to bodyweight in order to allow for different body size, such as for children of different ages. In the UK, the Committee on Toxicity (COT) has set a TDI for dioxins, furans and dioxin like PCB's of 2 picograms I-TEQ/Kg-bodyweight/day. The assessment indicates that the maximum predicted intake of dioxins and furans by a variety of human receptors (including children, farmers and residents) contribute at worst 0.06% of the TDI, with the background levels contributing approximately 35% of the TDI.

In addition the applicant has undertaken a human health risk assessment to consider emissions of dioxins, furans and dioxin like PCBs. They have followed a conservative risk assessment methodology (considering inhalation, ingestion and dermal intake) and described the impact as insignificant.

In 2009, the Health Protection Agency has reviewed research undertaken to examine the suggested links between emissions from municipal waste incinerators and effects on health. While it is not possible to rule out adverse health effects from modern, well-regulated municipal waste incinerators with complete certainty, any potential damage to the health of those living close-by is likely to be very small, if detectable.¹

¹https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/384592/The_impact_on_health_emissions_to_air_from_municipal_waste_incinerators.pdf

The applicant has not submitted its consideration of transport emissions within this application.

An acoustic assessment has been submitted in support of the application. The assessment recommends a series of measures to reduce noise levels and reduce its impact to sensitive residential receptors.

Any additional information obtained by the Regulator in relation to these comments should be sent to us for consideration. Such information could affect the comments made in this response.

Yours sincerely

A handwritten signature in black ink that reads "F. M. Kinghorn". The signature is written in a cursive, slightly slanted style.

Fiona Kinghorn
Interim Director of Public Health