



GIG
CYMRU
NHS
WALES

Iechyd Cyhoeddus
Cymru
Public Health
Wales

Tim Amddiffyn Iechyd

Iechyd Cyhoeddus Cymru, Y Deml Iechyd a Heddwch
Parc Cathays, Caerdydd, CF10 3NW

Health Protection Team

Public Health Wales, Temple of Peace and Health
Cathays Park, Cardiff CF10 3NW

10th October 2014

Gwefan/Web: www.iechydcyhoedduscymru.org
www.publichealthwales.org

Paul Bufton
Senior EHO
Powys CC
Neuadd Maldwyn
Welshpool
SY21 7AS

Dear Paul

Re ENQ 349 Enquiry regarding the transmission of campylobacter, ecoli and salmonella through airborne poultry dust.

Further to your email received on 07th October 2014, regarding the following:-

1. Concerns that *Campylobacter*, *Salmonella* and *e-Coli* may poison drinking water via the unregulated spreading of chicken faeces and the emission of poultry dust;
2. Concerns with regard to the unregulated spreading of chicken faeces containing *Campylobacter*, *Salmonella* and *e Coli* on fields which could drain into sources of drinking water;
3. Concerns regarding the spreading of *Campylobacter*, *Salmonella* and *e Coli* via the emission of Poultry Dust from the ventilation equipment

I can advise that manures can contain a range of zoonotic pathogens and incorrect storage can encourage the development of large fly populations that can have nuisance or disease transmission potential.

We would expect that the design, construction and management of manure stores will prevent or minimise emissions (and flies) and that such controls to be exercised through standard permit or planning conditions.

The farm operator should be required to devise, maintain and review a manure management plan detailing when and where manures will be stored and applied to land. The plan should be completed during the planning process or before a permit is issued and contain details of the control measures to avoid ground water contamination.

The potential impact to water should be low since discharges to ground or surface water should fully comply with the Groundwater Regulations 2009 (via the Environmental Permitting Regulations 2010).



Dusts and bioaerosols (airborne particles that contain living organisms, fragments, toxins, and waste products) may have possible health effects including exposure to infectious diseases, allergic reactions, respiratory symptoms and lung function impairment.

It is likely that the dispersion of bioaerosols will be dependent upon environmental circumstances such as local topography and prevailing weather conditions.

Mitigation measures addressing occupational health of workers within the farm and farm buildings will contribute to the protection of local communities. **Best Available Techniques**; including dust management plans, are required by permit conditions to avoid or mitigate emissions, including fugitive emissions.

There is little evidence on the health impacts from bioaerosols from intensive poultry farms. However, composting sites are known to produce considerable quantities of bioaerosols. When permitting composting industries regulators have considered a minimum distance of 250 metres from local communities. However exceptions to this 'limit' are allowed if effective mitigation techniques are employed. This limit is based on published studies which indicate that bioaerosols are generally reduced to background levels within 250 metres of the facility, although it is accepted that under certain circumstances, such as stable atmospheric conditions, bioaerosol concentrations may occasionally not be reduced to background levels within 250 metres.

Manure and dust management plans should therefore also contain actions to avoid and mitigate offsite dusts and bioaerosols during adverse dispersion weather conditions.

Conclusion

Intensive poultry farms may cause pollution but provided they comply with modern regulatory requirements any pollutants to air, water and land are unlikely to cause serious or lasting ill health in local communities.

If you have further queries please contact the undersigned.



Kristian James
Prif Arbenigwr Iechyd Cyhoeddus Amgylcheddol
Principal Environmental Public Health Specialist



GIG
CYMRU
NHS
WALES
Iechyd Cyhoeddus
Cymru
Public Health
Wales

Tim Amddiffyn Iechyd
Iechyd Cyhoeddus Cymru, Y Deml Iechyd a Heddwch
Parc Cathays, Caerdydd, CF10 3NW
Health Protection Team
Public Health Wales, Temple of Peace and Health
Cathays Park, Cardiff CF10 3NW



Gwefan/Web: www.iechydcyhoedduscymru.org
www.publichealthwales.org

26 May 2015

Our ref A00J60

Mr Alan Loveridge
Pencwm
Saint Harmon
Rhayader
Powys
LD6 5NG

Dear Mr Loveridge

Health impacts of broiler units

Thank you for your letter dated 20th May 2015. I can confirm that Public Health Wales may be consulted upon relevant planning or environmental permitting applications for intensive poultry units. We may receive consultation either directly from local authorities or regulators, or indirectly via Local Health Boards. Public Health Wales is consulted because there is either a statutory requirement to do so or where there may be public health queries.

Below is an outline of potential health issues we may comment upon. The nature of our comments ultimately depends upon the context of the individual planning or environmental permit application.

1. Health Concerns

Such operations have the potential for fugitive emissions to air, discharges to water and manure management impacts. Nuisances including noise, malodours and flies also need consideration. The impact of nuisance upon quality of life and wellbeing are difficult to quantify, as they can be subjective.

However adoption of the best available techniques, strict adherence to regulatory guidance and industry best practice can minimise such impacts. Mitigation measures addressing occupational health of workers within the farm and farm buildings may also contribute to the protection of local communities.

emissions and sensitive receptors the greater chance for dilution, subject to local topography and meteorological conditions.

Therefore our recommendation is to ensure that emissions can be minimised in the use of best available techniques and strict adherence to regulatory guidance and industry best practice.

4. Manure management and application on nearby land

The handling, storage, transport and manure spreading may cause odours. Sometimes odour impacts are modelled during the planning and permitting process, generating odour contours.

Manure management should include the control of flies and other pests to avoid nuisance and potential vector borne disease.

We would advise that manure storage and spreading impacts are also within any modelled odour contours or that overlap the modelled odour contours to avoid cumulative adverse odour impacts upon local residents.

We therefore would recommend that

- manure storage and spreading associated with the poultry sheds must be considered including manure storage and spreading within or overlapping the predicted odour contours to avoid cumulative odour impacts
- manure management should include the control of flies and other pests to avoid nuisance and potential vector borne disease
- regulators be satisfied that any odour model inputs, outputs and conclusions are locally applicable.

5. Public health impacts via groundwater/private drinking water supplies due to of manure storage and spreading

Manure spreading must not compromise local water supplies and therefore farm operators should be required to devise, maintain and review a manure management plan detailing the control measures to avoid ground water contamination.

6. Noise

A noise management plan is in place for all potentially noisy site sources and activities including for example

- Ventilation / roof fans
- Generators including emergency generators mounted plant
- Mobile plant
- Feed silos
- Site deliveries and stock despatch activities

emissions and sensitive receptors the greater chance for dilution, subject to local topography and meteorological conditions.

Therefore our recommendation is to ensure that emissions can be minimised in the use of best available techniques and strict adherence to regulatory guidance and industry best practice.

4. Manure management and application on nearby land

The handling, storage, transport and manure spreading may cause odours. Sometimes odour impacts are modelled during the planning and permitting process, generating odour contours.

Manure management should include the control of flies and other pests to avoid nuisance and potential vector borne disease.

We would advise that manure storage and spreading impacts are also within any modelled odour contours or that overlap the modelled odour contours to avoid cumulative adverse odour impacts upon local residents.

We therefore would recommend that

- manure storage and spreading associated with the poultry sheds must be considered including manure storage and spreading within or overlapping the predicted odour contours to avoid cumulative odour impacts
- manure management should include the control of flies and other pests to avoid nuisance and potential vector borne disease
- regulators be satisfied that any odour model inputs, outputs and conclusions are locally applicable.

5. Public health impacts via groundwater/private drinking water supplies due to of manure storage and spreading

Manure spreading must not compromise local water supplies and therefore farm operators should be required to devise, maintain and review a manure management plan detailing the control measures to avoid ground water contamination.

6. Noise

A noise management plan is in place for all potentially noisy site sources and activities including for example

- Ventilation / roof fans
- Generators including emergency generators mounted plant
- Mobile plant
- Feed silos
- Site deliveries and stock despatch activities

7. Ammonia

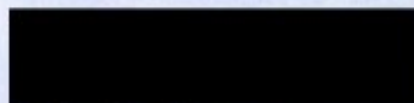
Ammonia may be emitted from poultry houses which may potentially impact on local people. The health effects of exposure to ammonia at low levels include cough, phlegm, headaches, nausea, wheezing, breathing difficulties and asthma. However, it is unlikely that ammonia emissions from a well run and regulated farm will be sufficient to cause ill health. Levels of ammonia will decrease rapidly once diluted in ambient air. We therefore recommend that the regulator is satisfied that the construction and operation of the sheds and the appropriate management of manure and feed/feeding cycles are appropriate to minimise ammonia emissions.

For information on control measures you may wish to view "Intensive farming environmental permitting guidance" via www.gov.uk.
<https://www.gov.uk/government/publications/intensive-farming-introduction-and-chapters>

Public Health Wales provides its comments via Local Health Boards who may in-turn offer additional local health advice. However final decision upon local planning or permitting rest with either local authorities or regulators - Natural Resources Wales.

I trust the above outlines Public Health Wales response. If you do have further queries you can contact the Environmental Health Protection Team.

Yours sincerely



Dr Marion Lyons

Director of Health Protection