

Pollution Prevention and Control (Northern Ireland) Regulations 2003

Example – Odour Management Plan Template, Pigs

Northern Ireland Environment Agency

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Record of changes

Version	Date	Change
1	April 2007	Initial version

Document B2.3.6 – Odour Management Plan – PIGS

Introduction

This Plan has been prepared as part of the IPPC permit application because there are sensitive receptors (neighbouring dwelling houses) within 400 metres of the installation.

The purpose of this Plan is to: -

- Establish the likely sources of odour arising from a typical pig unit.
- Set out the procedures followed at <name> Farm in order to prevent or minimise odour levels.
- Formalise the procedures for dealing with any odour complaints.

The table on pages 2 and 3 of this document sets out the likely sources of odour and the procedures followed to minimise odour levels.

Odour Complaint Procedures

- Any odour complaint received will be dealt with by the operator <Name>.....of the farm.
- If a complaint is made, the form included on page 6 of this Plan will be completed and this will be available for inspection by the Environment and Heritage Service.
- Information will normally be collected by visiting the complainant, although in some cases, contact may be made by telephone.
- After details of the complaint have been compiled, the cause(s) will be investigated, with reference to:
 - The activities taking place on the farm at the time.
 - The timing of the complaint and whether weekday, weekend etc.
 - The weather conditions at the time.
- The likely reasons for the complaint will be added to the form and the complainant will be contacted as appropriate.
- The feasibility of making changes to the activities responsible for the complaint will be considered. If changes are made, the Odour Management Plan will be amended accordingly.

Review Procedures

The plan shall be reviewed at least every three years or as soon as practicable after a complaint (whichever is the earlier) and changes recorded in the Table on page 7 of this plan.

Typical Odour Sources and Actions Taken to Minimise Odours

Odour Related Issue	Potential Risks and Problems	Actions taken to minimise odour and odour risks at <name> Farm
Effects of diet on odour and ammonia emissions	<ul style="list-style-type: none"> • Increased water consumption and urine excretion, and high manure moisture content due to diets poorly matched to pigs requirements, especially protein. 	<ul style="list-style-type: none"> • Feed composition is closely matched to pig's requirements, especially protein, to minimise water consumption and urine excretion, and to help minimise manure moisture content. • Sows are fed two diets through separate feed bins and wet/dry feeding systems. Growing and finishing pigs are fed 3 different diets either ad-lib dry or through the wet feed system. • Rations are under periodic review.
Manufacture and selection of feed	<ul style="list-style-type: none"> • Milling and mixing of compound feeds. • The use of poor quality and odorous ingredients. • Feeds which are 'unbalanced' in nutrients, leading to increased excretion and manure moisture and emissions of ammonia and odorous compounds to air. 	<ul style="list-style-type: none"> • On-site milling and mixing facilities will be well maintained and sealed as far as practicable to minimise emissions of dust and odours. • Feed specifications are prepared by the feed compounder's nutrition specialist • Feed ingredients are supplied only from accredited sources, so that only approved raw materials are used.
Feed delivery and storage	<ul style="list-style-type: none"> • Spillage of feed during delivery, on-site conveying and storage. • Creation of dust during feed delivery. 	<ul style="list-style-type: none"> • Feed delivery and storage systems are sealed to minimise dust emissions, and spillage of liquids. • Any spillage of feed is immediately cleaned up. • The condition of feed bins and tanks is checked frequently so that any damage or leaks can be identified.
Manure storage	<ul style="list-style-type: none"> • Odours arising from manure handling. • Insufficient bedding material. 	<ul style="list-style-type: none"> • Wind direction/weather is considered when handling manure. • Manure is loaded directly into trailers. • Sufficient bedding material is provided. • Good husbandry is practised to encourage good dunging behaviour. • A health plan is used, with specialist veterinary input used as necessary.

Odour Related Issue	Potential Risks and Problems	Actions taken to reduce odours and risks at this installation
Slurry storage	<ul style="list-style-type: none"> • Increased odour emission from uncovered slurry stores • Increased odour emission when stirring or flushing slurry 	<ul style="list-style-type: none"> • Slurry stores are covered. • Wind direction is considered when stirring or flushing slurry. Stirring/flushing avoided if possible if wind is blowing from farm towards dwellings. • Only stir if necessary during emptying.
Manure/slurry spreading	<ul style="list-style-type: none"> • Spreading in wrong weather conditions. • Inappropriate methods of spreading. • No incorporation of slurry into soil. 	<ul style="list-style-type: none"> • All slurry/manure spreading operations will be undertaken in accordance with the recommendations in the DARD code of good practice. • Spreading will be avoided when the wind is blowing from the farm towards dwellings. • Low trajectory spreading equipment will be used. • Where practical, slurry will be incorporated within 24 hours. • Spillage will be avoided and/or immediately cleaned up.
Yard areas	<ul style="list-style-type: none"> • Poor cleanliness of yard areas. • Inadequate control/treatment of run-off. 	<ul style="list-style-type: none"> • All yard areas are washed down and kept clean after use. • The use of scrapers to move slurry/manure across yards is avoided. • Trailers/tankers are loaded directly from stores. • Wash water is added to slurry tanks, and only clean run-off is treated by swale.
General management for all housing	<ul style="list-style-type: none"> • Poor husbandry resulting in high odour emissions. • Poor cleanliness of stock and pens. • Spillage of odorous materials. • Inappropriate stocking densities/poor pig dunging behaviour. 	<ul style="list-style-type: none"> • A high standard of husbandry will be maintained at all times. • Stock and pens will be maintained in as clean a condition as possible. • Any spillage of odorous material will be cleaned up immediately. • Stocking densities will be kept below the levels set out in welfare regulations and good husbandry will improve pig dunging behaviour.
Dry sow housing	<ul style="list-style-type: none"> • Poor maintenance and cleanliness of pens. 	<ul style="list-style-type: none"> • Pens will be scraped out three times a week to a covered store.
Farrowing housing.	<ul style="list-style-type: none"> • Poor drinking water systems and house management. 	<ul style="list-style-type: none"> • Drinkers are located over troughs. Pens have solid, under-heated floors with creep areas.
1st and 2 nd stage weaner housing	<ul style="list-style-type: none"> • Poor ventilation and heating control systems resulting in increased emissions. Potential for over frequent slurry removal. 	<ul style="list-style-type: none"> • Ventilation and heating control systems will be reviewed as part of the review of existing housing, and new insulation will be added when refurbishing flat-decks.
Carcass disposal	<ul style="list-style-type: none"> • Inadequate storage of carcasses on site. • On-site disposal of carcasses by incineration. 	<ul style="list-style-type: none"> • Carcasses are placed in sealed containers immediately after they are removed from housing and removed from the site once or twice weekly. OR • A purpose-designed incinerator which is approved by DARD is used.

Odour Related Issue	Potential Risks and Problems	Actions taken to reduce odours and risks at this installation
Part slatted finishing housing	<ul style="list-style-type: none"> • Too large exposed area of slurry. • Poor positioning of fan/air outlets. • Poor cleanliness of pens. • Slurry stirring/removal. 	<ul style="list-style-type: none"> • Pens are part slatted to minimise exposed slurry area. • High level fans are used to ensure rapid dispersion of odours. • The frequency of slurry removal will be reviewed to find an optimum balance between reducing ammonia and odour emissions.
Dust emissions (dust can be a vector for odours)	<ul style="list-style-type: none"> • Poor storage of dry feed ingredients. • Poor maintenance of milling and mixing equipment. 	<ul style="list-style-type: none"> • All dry feed ingredients are stored in sealed bins. • Hoppers on mixing equipment are covered and machinery is well maintained. • Liquid feed is used as much as possible.

Improvement programme to reduce odours - examples

Odour problem	Remedial action needed to reduce odour	Completion date	Ref: Farming rule (if applicable)
Odour from carcass skip during hot weather	Improve sealing of cover on skip, increase frequency of carcass collection to twice weekly during summer months.	May 2007	2.3.6
Odour from slurry store.	Arrange for a cover for the store to be manufactured.	October 2009	2.3.6
Odour during feed mixing.	Improve sealing and fit a cover to the milling/mixing equipment.	October 2007.	2.3.6
Odour from yard areas.	Ensure that contaminated yard areas are cleaned up after use.	November 2008	2.3.6

Note: The above are examples of improvements that may be required in some circumstances. If they are not relevant to your situation they can be deleted. If you have identified improvements that are required to reduce odours on your farm, please detail them using the table above.

Odour Complaint Report Form

Installation to which complaint relates	Date recorded	Reference number
Name and address of caller (complainant)		
Telephone number		
Details of complaint		
Date, time and duration of offending odour		
Odour description e.g. comparison with other odours, strong / weak, continuous, fluctuating		
Any other comments from complainant		
Weather conditions (e.g. dry, rain, fog, snow)		
Wind strength and direction (e.g. light, steady, strong, gusting) or use Beaufort scale		
Any other previous complaints relating to this odour?	Yes / No	
Any other relevant information		
Potential odour sources that could give rise to the complaint		
Operating conditions at the time offending odour occurred e.g. removing manure, clean-out		
Follow-up		
Date and time caller contacted		
Action taken		
Amendment required to the odour management plan?	Yes / No	
Form completed by		Signed

Review of Odour Management Plan - Record

Date of review	Summary of changes made	Signature