

EA update on regulatory issues & developments affecting AD

**Viv Dennis
Senior Advisor, Environment Agency
REA Biogas/ORG meeting,
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Headline issues and developments

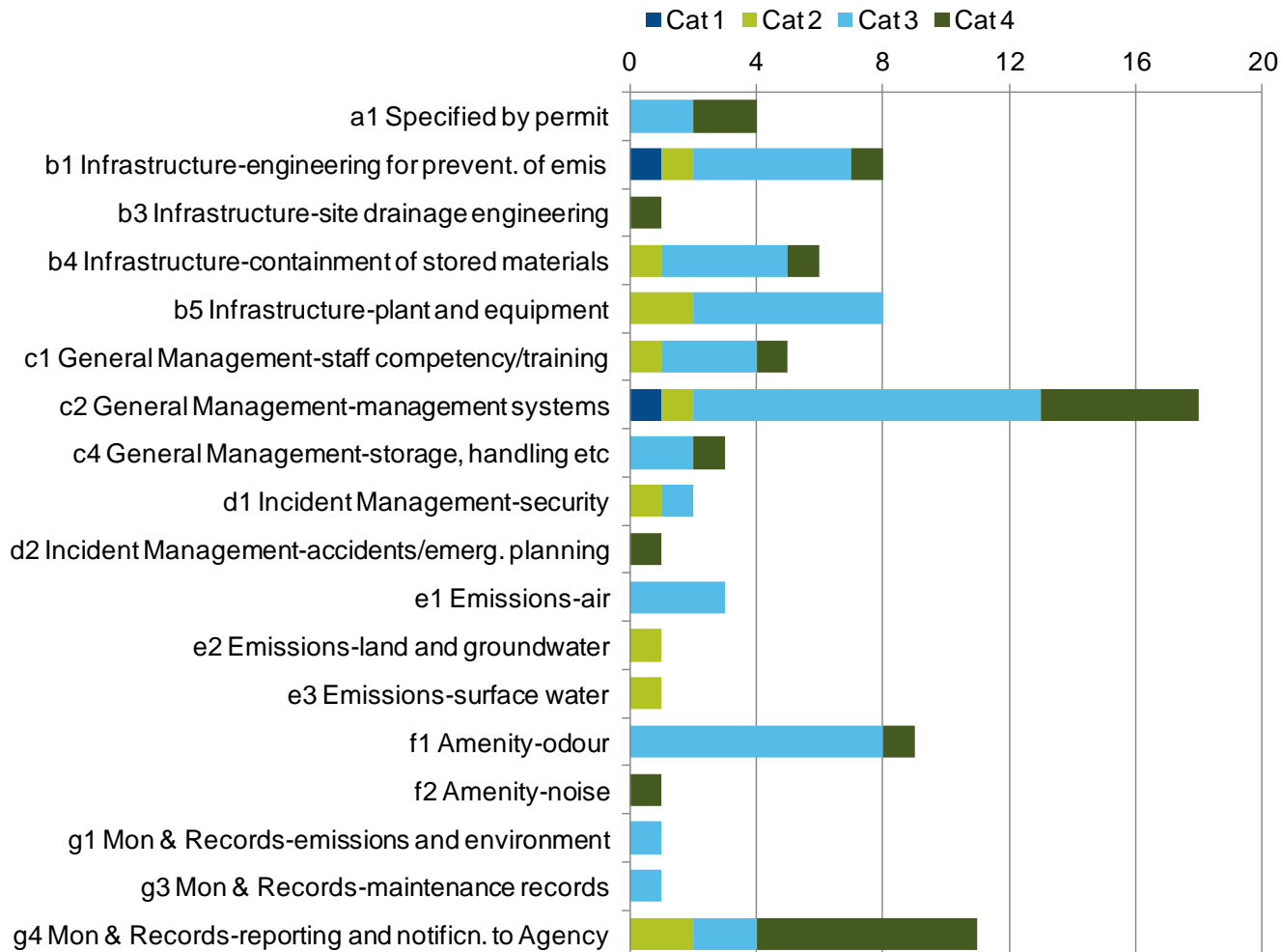
- ➔ Biowaste treatment sector environmental performance
- ➔ Permit compliance
- ➔ Desk-top EMS screening assessment at AD sites
- ➔ Guidance and Industry Best Practice Scheme
- ➔ Digestate drying & biogas upgrading
- ➔ Standard rules consultation – landspreading and treatment
- ➔ Waste/non-waste feedstocks and outputs
- ➔ Other issues
 - ➔ Industrial Emissions Directive & BREF
 - ➔ EU Fertiliser Regs proposals
 - ➔ COMAH and digestate storage

Environmental performance: permit compliance 2013/4

- ➔ The biowaste treatment sector had 8% of permits in compliance bands D-F, this is one of the largest proportions of any sector. ...7% in 2012/3
- ➔ For AD alone, figure was 9% (6% in 2012/3)
- ➔ 20 biowaste treatment sites in bands D-F for over 2 years
- ➔ We are increasing our focus on high risk and poor performing sites across all sites
- ➔ If worst performing sites don't improve, we will suspend or revoke their permits

Causes of permit breaches at AD sites in 2013/4

Permit breaches, anaerobic digestion (AD) sites we regulate by reason for breach, England, 2013



➔ 28% were due to general management – management system

➔ 23% related to infrastructure

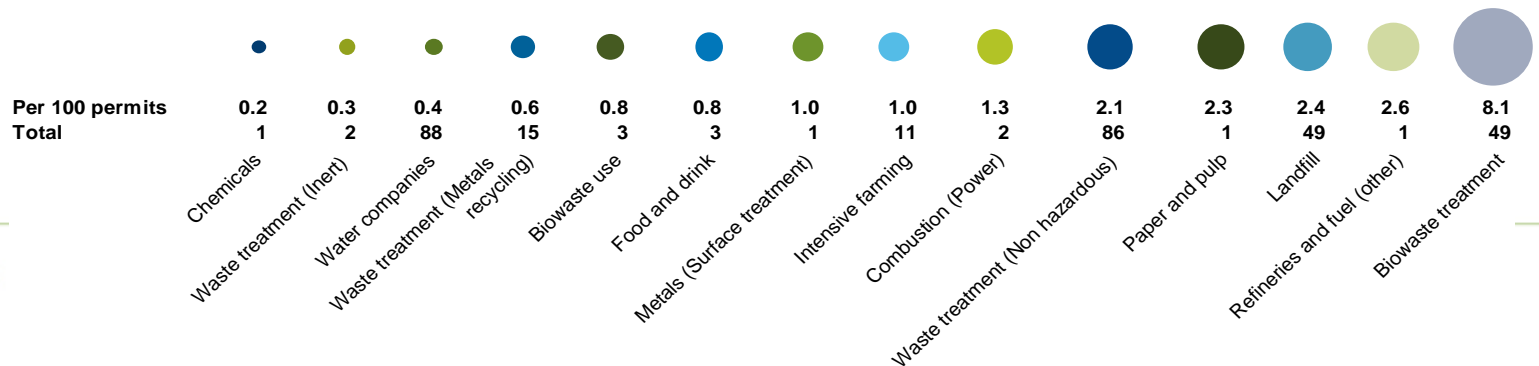
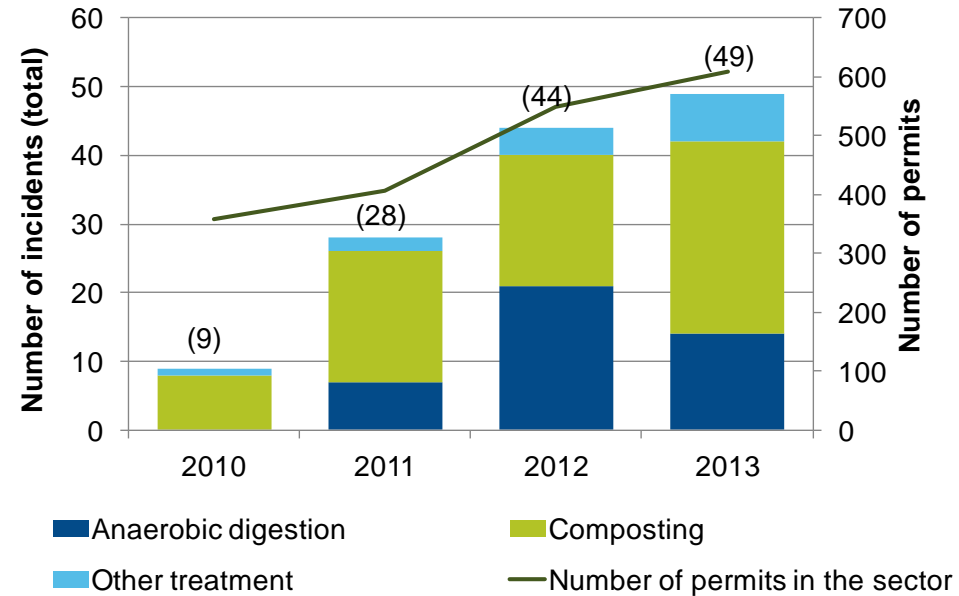
➔ 17% were due to reporting and notification.

➔ 14% were due to odour

Environmental performance 2013/4: Serious and significant pollution incidents

- ➔ Year on year increases at biowaste treatment sites from 2010 to 2013.
- ➔ 10 of the 49 pollution *incidents* happened at one site, 5 at 2 others*.
- ➔ Highest proportion of any sector we regulate (8.1 incidents per 100 permits). Up from 8.0/100 in 2012 and 6.9/100 in 2011.
- ➔ AD plants 21.9/100 (58.3 in 2012), composting 9/100 (6.3 in 2012*).

Serious pollution incidents caused by the biowaste treatment sector in England



Achieving compliance - some relevant permit conditions 1

General management

1.1.1 The operator shall manage and operate the activities:

- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
- (b) using sufficient competent persons and resources.

How to comply with your environmental permit



1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.

Achieving compliance - some relevant permit conditions 2

⇒ Operating techniques

- ⇒ storage & process tanks fit for purpose and regularly inspected and maintained
 - ⇒ Digestate storage fit for purpose
 - ⇒ Significant emissions of unburned biogas to be recorded
- ⇒ All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise leakage and spillage from the primary container.

Containment failure incidents



We believe that one of the main causes is failing to manage and operate AD plants in accordance with adequate management systems



External Briefing - review of containment failure incidents at anaerobic digestion facilities, 2010 to 2013

Introduction

The Environment Agency is concerned about the increasing number of serious or potentially serious pollution incidents caused by containment failures at the AD plants we regulate. Not only are these a threat to the environment and human health, but they undermine public and investor confidence in the AD industry and could hinder its growth.

We have reviewed incidents of this type occurring in 2010 to 2013 and have identified the following causes and contributing factors as follows:

- Inadequate foam prevention, monitoring, suppression and additional foam design handling features.
- Failure of safety valves and/or gas off takes – due to blockages
- Failure of alarms – due to inactivation of detection devices
- Failure of procedures – not in place or not followed
- Poor secondary containment standards for earth-banked and constructed bunds – leaking and collapsing
- Leaking joints/seals
- Leaking AD tank membranes
- Failure to control feedstock
- Operator unaware of own system – contracting out
- Poor operator safety
- Little process monitoring
- Missing records

Looking at these causes and contributing factors, it appears that all these incidents are preventable.

Discussion

These incidents have prompted us to look at whether the environmental permits we issue for AD plants provide an adequate level of control and protection. The conditions we use in permits are designed not to be over-prescriptive; they generally set the

EA's desk-top EMS screening assessment at AD sites – 1, checking on ...

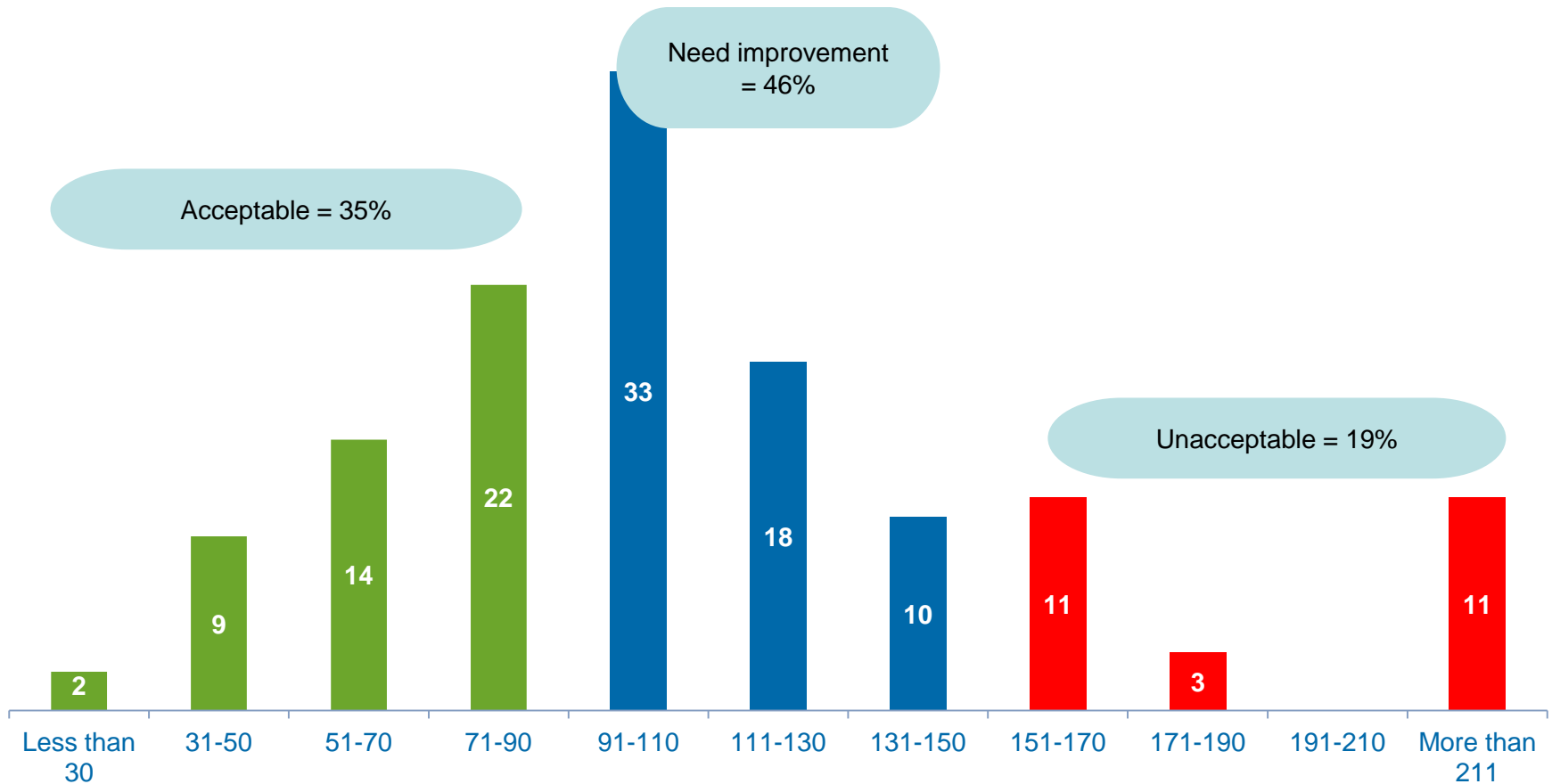
- ⇒ Incident and contingency management plans
- ⇒ Technically Competent Managers - attendance on site
- ⇒ Is there a DSEAR plan for the site?
- ⇒ Use of gas alarms within the site
- ⇒ Staff competence in dealing with incidents etc
- ⇒ Process control and systems monitoring
- ⇒ Plant and equipment maintenance and inspection
- ⇒ Gas storage systems
- ⇒ Liquid containment systems.

AD score analysis

Hub	Sites	Median score	Management	Containment
West	49	98	62	34
South East	33	114	74	29
North East	50	95	60	38

Permits	Sites	Median score	Management	Containment
All	133	101	64	33
Standard rules	51	108	66	32
Other	82	100	59	34

AD assessment tool score frequency



Guidance and Industry Best Practice Scheme

- ⇒ EA have developed a lot of guidance for permit applicants and operators – eg TGNs, RGNs, Horizontal Guidance
- ⇒ Our approach to guidance has changed as a result of Government's Streamlining Environmental Regulation Review and with closing of EA website last year
- ⇒ Considerably reduced quantity and scope of EA guidance, expectation for industry to develop its own guidance
- ⇒ We are encouraging and supporting ADBA, REA and others to develop an AD Best Practice Scheme, early focus on
 - ⇒ Training and technical competence
 - ⇒ Bunding and containment requirements at AD plants

Digestate drying & biogas upgrading



Standard rules consultation – landspreading and AD treatment

⇒ AD SRs

- ⇒ small changes including capacity, emission points to air, stack height
- ⇒ Very few consultation comments
- ⇒ Minor changes to all biowaste treatment SRs to ensure consistency

⇒ Landspreading SRs

- ⇒ 47 comments received, published on gov.uk
- ⇒ We are drafting a response document, due for publication in May
- ⇒ We can't pre-judge what will be in this document

Waste/non-waste feedstocks & outputs

- ➔ Crop residues briefing note <http://www.organics-recycling.org.uk/page.php?article=2885&name=EA+briefing+note+on+crop+residues+used+as+feedstocks+in+AD+plants>
- ➔ Waste/non-waste guidance - <https://www.gov.uk/turn-your-waste-into-a-new-non-waste-product-or-material>
- ➔ IsITWaste tool and EA definition of waste panel
- ➔ Regulation of crop-based AD? – Defra plan to look at different approaches

Other issues

- ⇒ IED- biological treatment EPRegs, section 5.4 A (1)
 - ⇒ all variation applications should be in by now
 - ⇒ permit applications (a) (i) – 45, (b)(1) – 51
 - ⇒ some scoping issues still outstanding
 - ⇒ Non-IED versions of SRs will replace existing SRs for operators not applying for IED variations
- ⇒ Covered in REA Briefings & Progress Report
 - ⇒ Waste Treatment BREF review
 - ⇒ EU Fertiliser Regs – end of waste and ABP controls
 - ⇒ COMAH and digestate storage


IED

➔ Waste-related sections of EPRRegs

- 5.3 - Disposal or recovery of haz. waste by biological treatment, capacity > 10 t/d
- 5.4 - recovery or recovery & disposal of non-haz. waste by biological treatment, capacity > 100 t/d if only AD
- 6.8 - disposal or recycling of animal waste by AD, capacity > 10 t/d animal waste
- 5.1 - incineration of haz. waste in a waste incineration or co-incineration plant, capacity > 10 t/d

➔ Pre-existing non-IPPC sites must have new or varied permit from sites 7 July 2015, defence window 30th Sep 2014

➔ Requires application of best available techniques to reduce impact on the environment as a whole.



**Thank you
Any Questions?**