

This Document represents the final synthesis of EPA consideration of Submissions.
This consideration commenced in November 2008.



**OFFICE OF CLIMATE,
LICENSING & RESOURCE USE.**

MEMORANDUM

To:	DIRECTORS	
From:	Dr J Derham	Environmental Licensing Programme
Date:	17/2/2009	
RE:	Assessment of Submissions received on EPA Municipal Solid Waste Pre-Treatment Consultation Document	

The EPA received 21 submissions and some related correspondence concerning the Municipal Solid Waste (MSW) Pre-Treatment consultation draft published 22nd September 2008. The following memorandum examines the specifics of submissions made and makes recommendation for amendment of the Waste Pre-Treatment note, or other action, as appropriate. The recommended Final version of the MSW Pre-Treatment Guidance is appended to this Memorandum.

Most all the submissions recognise the urgent need to take action in relation to the requirements of the Landfill Directive and broadly welcome the EPA initiative.

Submission #1 Dr T Nealon, A1 Waste

1.1 Demonstration

A1 believe there will be difficulties for landfill operators in demonstrating that all waste received for disposal has been appropriately treated. They comment that the variety of customers and the closed nature of received containers will present problems, and that even if material derives from 'proper' pre-treatment facilities, it will be impossible to prove adequate pre-treatment.

Comment: It is recognised that the pre-treatment obligation will be a significant challenge for landfill operators. But under the obligations of the Landfill Directive, operators must. This is a basic requirement of landfill operation. The EPA licences for landfills require the establishment of waste acceptance procedures, including inspection, testing and verification. Moreover a facility is generally prohibited from accepting waste straight to disposal from non-pre-cleared customers. It is this waste profiling and pre-clearance obligation that will assist in generating the necessary proofs that up-stream treatment facilities or customers are applying the appropriate treatment effort. These up-stream facilities will also generally be subject to EPA licence or Local Authority permit, and accordingly subject to inspection and audit. In addition it

is expected that landfill operators will be required to audit and verify the operations of a client before accepting their waste for disposal.

Key to the pre-treatment obligation will be a driver sufficient to discourage low ambition in relation to pre-landfill treatment. It will be essential to the success of the EPA's initiative that the State introduce a system of tiered Landfill taxes. A high tax should be set for untreated waste, a medium tax for a waste with dry recyclables removed, and a lower tax for wastes with no dry recyclables and the biodegradables removed/stabilised. These taxes should be set sufficiently high as to encourage effective pre-treatment.

See also comments on Submission 5.7 below.

1.2 Figure 5

The submission identifies some concerns in relation to the material flow paths for biodegradables in this figure. The submission interprets that the 3rd Bin Mixed organics are only permitted to go to incineration or stabilisation, and not to the quality compost market.

Comment: The Figure identifies via the dashed line (after Biological Treatment box) that where markets exist, this 3rd Bin material should go to the compost market. To date the market has been reluctant to accept into the domestic or horticultural market the product of mixed organics composting (including catering wastes – a Category 3 Animal By-Product).

1.3 Source of Waste

In relation to validation of treatment effort the submission notes that a delivery truck can have both urban & rural wastes.

Comment: Point accepted. See also comments on Submission 4.4.

1.4 Measuring Biowaste

In the context of the obligations set out in Figure 6 the submission identifies that the measurement of the biowaste will be problematic. Moreover, on account of these pre-treatment initiatives the 'character' of waste will change, resulting in a requirement for evolving statistics on account of diminishing biowaste fractions in the waste. The submission also queries what sort of test frequency will be required, including failure tolerances, etc. Finally the submission asks what will happen the waste when the testing is being undertaken.

Comment: It is recognised that such measurement will represent challenges. The EPA OEE will over the coming months establish testing and sampling protocols to be used to verify biowaste treatment effort (including failure tolerances). These, and the statistical methods of estimating the proportion of biowaste in the average bin will be a subject of ongoing review (as has been the case in the past to date). The EPA OCLR expect to publish their latest MSW characterisation study in the coming months. This work is essential to the demonstration of success of the pre-treatment initiatives, and in enabling Ireland make accurate statistical returns to Europe. This characterisation study will likely be repeated in 2011 or 2012.

It is anticipated that the stabilisation tests will be undertaken on material prior to acceptance at the landfill (as part of the waste acceptance procedures). Any non-pre-cleared material arriving should be either refused, or placed in

the landfill quarantine area pending approval/acceptance (as is normal under standard waste acceptance procedures). If subsequent EPA enforcement compliance testing indicates that the material has been insufficiently treated, it can be excavated and re-treated, and/or the higher landfill tax applied to a sufficient proportion of the fill associated with the sample failure. The latter should provide sufficient incentive to apply adequate treatment (see Recommendation for Submission 5.7 below). Such matters will be for the EPA OEE to develop as part of their enforcement plan for the waste pre-treatment obligations.

1.5 Stabilised biowaste?

The submission is unsure whether stabilised biowaste when put to landfill will be counted as biowaste when measuring achievement against targets.

Comment: If the waste put to landfill has been appropriately treated, with biowaste removed or stabilised, then it will no longer be counted as biowaste for the purposes of compliance with EU diversion/pre-treatment targets.

Submission #2. A Mullready for Mullready's Ltd

2.1 The 3 Bin System

The submission comments that the requirement for a 3 bin system is a major cost, with more frequent traffic too. The submission is not convinced of full public participation in the 3 Bin system. The submission prefers the 2 bin system, and suggests the 'Black Bin' should be sent for treatment to remove compostables and any other recyclables. A high degree of success is reported from the Mullready system.

Comment: Whilst the EPA Draft MSW Pre-Treatment guidance does not mandate the 3 Bin system, it is important to recognise that the 2 Bin system has significant penetration in the Irish waste management market, and that the 3 Bin system is growing rapidly. Moreover, the Ministerial Circular WPPR 17/08 (31-7-2008) to each County & City Manager requires that a 'brown bin' (for source segregated biodegradables) be implemented as a matter of urgency for all urban areas over 1,500 persons. The 3rd bin for organics is now a matter of national policy. The Government Circular also recommends that the Local Authorities use the Waste Collection Permit authorisation system and/or By-Laws as appropriate, to ensure the separate collection/source segregation of biodegradables.

The matter of the role of the 3 Bin System in the EPA MSW Pre-Treatment Guidance note will be returned to in discussions on later submission (see Submissions 11.1 and 11.2).

Submission #3. C Walsh for MCR Group

3.1 Stabilization Standard

The submission welcomes the EPA standard for stabilised biowaste as set out in the consultation document. The submission notes that the German standard (half that of the proposed EPA standard) requires excessive energy to achieve the final stages of stabilization.

Comment: The adopted EPA standard is taken from the stalled draft EU Biowaste Directive, and has been used in EPA composting licences for a number of years.

This matter is discussed in greater detail in the comment to Submissions 6.6 and 10.3 below.

3.2 Promotion of Waste Treatment Technologies & market certainty

The submission suggests that the EPA can contribute to the development of treatment technologies by restricting access of certain wastes to landfill; introducing standards for recovered materials; recognition of economies of scale; taking control of the waste collection permit system; and taking control of the animal by-products issues at waste treatment sites. In addition the submission requests that the EPA introduce measures to provide market certainty (via restrictions, etc).

Comment: The MSW Pre-Treatment consultation note introduces EPA plans to restrict disposal of certain waste streams to landfill, and provides standards for stabilised biowaste. EPA funded research is soon to yield a standard for high quality compost. There are no current government plans to move the waste collection permit system to EPA control. It makes a great deal of sense that the EPA collaborate with the DoAFF in relation to producing a joint technical standard for composting activities involving animal by-products. The current system has the potential to result in conflicting technical standards. Moreover the introduction of a requirement for multiple authorisations and technical approval may frustrate the delivery of key national infrastructure.

Recommendation

The EPA should continue to work with the DoAFF to produce technical standards (BAT) for composting activities involving animal by-products. This guidance could be used for activities regulated by Local Authority Waste Permit or EPA Waste Licence. A streamlined or joint approval mechanism should also be considered where DoAFF views and requirements are solicited at permit/licence assessment stage.

Submission #4. Fehily Timoney & Company

4.1 Grammar, Spelling, References

The submission comments that the document contains typographical and grammatical errors. And some of the references need to be clarified (e.g. published or soon to be published EPA guidance).

Comment: These matters, where identified, will be addressed in the final document.

4.2 Guidance on Landfill Objectives

The submission notes that the EPA Consultation Document gives clear guidance as to the means of implementation of the Directive. However the submission asks if further guidance is to be produced in relation to implementation of the Directive.

Comment: It is not clear as to what exactly the submission is requesting on this point. That said, the EPA OEE will be producing guidance on the sampling, testing, and verification protocols for biowaste stabilisation. In addition the OEE will have to develop inspection & audit protocols – i.e. an enforcement policy in relation to the pre-treatment initiatives. These matters have already been discussed with, and contemplated by, the OEE waste enforcement team. The EPA will be publishing BAT notes for the sector, including a compost standard.

4.3 Recovery Rates

The submission believes a reference to the 50% recovery rate specified in the forthcoming revision to the Waste Framework Directive would be useful.

Comment: Accepted. See Article 11 of the revised Waste Framework Directive 2008/98/EC.

Recommendation

Amend EPA MSW Pre-Treatment note to include reference to new EU MSW recycling target rate of 50% by 2020.

4.4 Clarification of Minimum Pre-treatment requirements for urban/rural collections

The submission seeks clarification as to whether mechanical treatment is required for rural residual bins, and also asks what is meant by the use of the term 'equivalent' on page 15 of the Consultation document.

Comment: The matter of the differentiation between rural and urban collections and the pre-treatment effort required has been raised by a number of the submissions. The general comment is that the difference is not significant enough to warrant a variation in standard of approach. In relation to the use of the term 'equivalent' (i.e. use of a 2 bin system or equivalent), what is anticipated by this is where say waste from commercial or industrial operations that is similar in character to household waste, or indeed waste from apartment complexes that is not collected by a 2 or 3 bin system will need to be processed mechanically/biologically to achieve an equivalent degree of diversion.

4.5 Order of Treatment

The submission notes that in some waste treatment configurations the biological treatment step may precede the mechanical step for 'Black Bin' residuals. Figure 5 does not indicate this option.

Comment: Point accepted. Figure 5 was intended to reflect typical waste processing paths and is not intended to be exhaustive.

Recommendation

Amend Figure 5 to identify Mechanical & Biological Treatments as sequence independent steps.

4.6 Compost from Black Bin Residuals

The submission comments that in Figure 5 the broken line from the biological treatment of Black Bin residues would suggest that there could be a market for such materials, whereas in reality there is not.

Comment: The line between biological treatment of black bin residues was deliberately dashed to suggest a possible but not certain materials flow path. Moreover the dashed line contained text that emphasised this possible but not probable market. A revision of Figure 5 to account for this, and later submissions, should make the point clearer.

4.7 Terminology

The submission comments that the term 'incineration' appears to be interchangeable with terms like waste to energy, thermal treatment, etc. Clarity is required.

Comment: Accepted.

Recommendation

Clarify use of term Incineration with other thermal treatments & waste to energy in text.

4.8 Bio-treatment prior to incineration

The submission suggests that bio-treatment of black-bin organics prior to incineration would be unusual. However, if proposed it would be in excess of minimum standards, and would not need 'verification' as suggested in the consultation document.

Comment: It is accepted that bio-treatment prior to incineration would be uncommon, this is why the consultation document shows it as an optional path and subject to verification. The reason this step has to be verified would primarily rest with energy balance and CO₂ emissions. For example, if the bio-treatment of black bin residuals prior to incineration (with energy recovery) was shown to be a net consumer of energy, then the EPA would have to

question the appropriateness of the technology, regardless of the social or political expectations.

4.9 Bio-Waste Stability Standards & Testing

The submission welcomes the use of the stability standards specified in the Consultation document, and comments that the use of these standards is appropriate to the stage of development of the bio-waste treatment market in Ireland. They believe the German & Austrian standards to be too onerous. In addition the submission suggests that there are different respiration test methodologies that can be more efficient in turn-around.

Comment: The matters of the stability standard and test methodologies are dealt with in the comments on the Cré submission (c.f. Submission 10.3).

4.10 Co-ordination with Animal By-Product (ABP) Requirements

The submission recommends that any protocols for compost/stability testing and process verification should be established in consultation with the national body responsible for ABPs.

Comment: See comment on Submission 3.2 above.

Submission #5 CEWEP Ireland (Confederation of European Waste to Energy Plants, Irish branch)

5.1 Clarification of Treatment Requirements

The submission believes that the treatment obligations set out in Figure 6 might be interpreted as being different to that set out in Figure 5, particularly in respect of the mechanical treatment of black bin wastes prior to incineration.

Comment: The issue revolves around the reference to Solid Recovered Fuel (SRF) in the 'Landfill' section of Figure 6. It was not the intention of this reference to link the SRF production to merchant waste to energy incineration plants. The SRF in this case was referencing solid fuels of a defined specification that are made from waste, and are sent to co-incineration (co-firing) plants (i.e. power units attached to industrial manufacturing operations). This can be clarified with in the associated foot-note. That said, it may be appropriate for waste facilities located at a great distance from an incinerator to mechanically treat black bin residues prior to dispatch to a merchant incinerator if the road haulage costs/carbon footprint indicated that there was an environmental benefit to be accrued. The residues of this treatment are unlikely to be processed to a defined SRF specification.

Recommendation

Insert footnote 2 to Figure 6 (now figure 7) to read... 'SRF – Solid Recovered Fuels of defined specification for use as a fuel in co-incineration plants, or other energy uses as may be approved, where available.'

5.2 MBT

The submission supports the requirement for a 2-bin system where subsequent mechanical and biological treatments are available, but adds that in areas where the two bin system is not available the black bin should be directed to appropriated treatment (MBT) or incineration.

Comment: This concern is addressed in the text on page 15 of the Consultation document but not clearly incorporated into Figure 6.

Recommendation

Clarify through text as well as in Figures 6 & 7 (now 7 & 8), that where landfill is the main disposal route and the 2 or 3 bin system is not available, then the black bin should be consigned to a MBT equivalent.

5.3 Roll-out of 3 Bin system

The submission comments that the EPA MSW Pre-Treatment note should reference the Government Circular (WPPR 17/08, 31-7-2008) on the requirement for a third bin for source separated biowaste collection.

Comment: Accepted. See Comments on Submissions 11.1 and 11.2.

5.4 Energy Recovery

The submission requests that the energy recovery opportunities for all collected MSW waste whether urban or rural be encouraged in the technical guidance document.

Comment: Accepted. See Recommendation to Submission 5.1.

5.5 Urban – Rural Divide

The submission argues that the differentiation between urban and rural collections is not warranted, however CEWEP suggest that the appropriate level of treatment (beyond the minimum specified) should be on a site/region specific assessment. Most collections cover both urban & rural routes in their contracts.

Comment: The Government Circular on biowaste source separation and treatment (Circular WPPR 17/08) defines urban as >1,500 population. This would capture the majority of small rural towns and communities. The elimination of the urban/rural distinction is a point made by a number of submissions. See comments on Submissions 2.1 and 4.4 above.

Recommendation

Amend 'Minimum Pre-Treatment Obligations' section of the Consultation document and Figure 6 to eliminate the rural – urban distinction.

5.6 Infrastructure Deficit

The submission identified a new (for Ireland) waste storage technology (bailing – like silage wrap) that may be useful for storing mixed MSW, or separate fractions, pending delivery of necessary treatment infrastructure (see www.flexus.se).

Comment: Noted.

5.7 Enforcement Efforts

The submission identifies that clear enforcement for measurement and validation of pre-treatment effort is required. The submission believes the approach of making each landfill receiving MSW responsible will be more effective and easier to monitor. The submission expresses concern that landfills may seek to import higher quantities of waste prior to the individual thresholds coming into effect, and suggest a 'cap' may be appropriate.

Comment: See comments on Submissions 1.4 & 4.2 above. The OEE will in the coming months be developing the audit and validation protocols necessary to ensure compliance. As regards the cap, it should be noted that all landfills have an annual intake 'cap' in place. That said the introduction of a landfill levy that is higher for untreated wastes should act as a deterrent. It is considered essential for the success of the pre-treatment obligations that tiered landfill (and incineration) levies are introduced. It is my understanding that the Department is in the process of developing these.

Recommendation

EPA to communicate to the DoEHLG the critical and urgent importance of tiered landfill (and incineration) levies to the success of the waste pre-treatment obligations.

5.8 Bio-waste Stabilization Standard

The submission notes that the standard for stabilisation selected by the EPA is less strict than the German & Austrian standards. The latter being based on a 90% improvement in landfill gas and leachate behaviour, and may involve more than 10 weeks in treatment. The submission acknowledges that long treatment is cost prohibitive. The submission asks that the EPA monitor on an ongoing basis the effectiveness of bio-stabilisation and the impact of residues with a view to ensuring that the standards of stabilisation are appropriate.

Comment: The ideal situation is where the majority of municipal biowaste is diverted from the disposal stream. The Government Circular cited previously (WPPR 17/08) reinforces this ambition. The standard adopted in the EPA consultation is extracted from the now suspended EU Biowaste Directive, and has been used in EPA composting licences for a number of years. It is recognised that this standard is not as strict as in some other Member States, however infrastructure in Ireland is very underdeveloped at this time. The standard proposed in the consultation document is reported as being used by the French, Finns & Italians. Any requirement to a higher standard would significantly extend required residence time for waste in bio-treatment facilities, and thereby reduce their throughput efficiency. This may compromise the State's ability to achieve the first biowaste standard for 2010. The duration of the treatment is the principal difference between the

standards. which results in reduced fermentability and thereby landfill gas and leachate production potential. The 5 mgO₂/g DM standard typically requires twice the composting residence time as would the 10 mgO₂/g DM standard. It is therefore proposed that no change is made at this time.

The Fehily Timoney EPA STRIVE study on MBT (2008, pp 243) comments;

'Laboratory testing has shown that by achieving the 10 mgO₂/g DM (AT4) limit, the amount of landfill gas produced from MBT stabilised waste can be reduced by 90% - 95%, while a landfill with untreated waste will reach this stability level after approximately 100 years.

The reduction in landfill gas production potential and the organic content of waste is not directly proportional but can be correlated i.e. the reduction of 1 g of carbon does not result in the equivalent reduction in landfill gas generation. Muller et al (2004), using GasSim models, calculated that pre-treated organic waste with a 90 % reduction in biodegradable organic content sees a corresponding reduction in methane generation of approximately 74 %.'

However for subsequent biowaste diversion obligations (e.g. by 2016) a higher treatment standard may be appropriate and might be expected as a matter of developing BAT – reducing overall impact of landfill on the environment. Approximate assessments based on published. A 90% reduction in methane production potential at landfills could yield an approximate 12Mt reduction per annum of CO₂ equivalent.

This should be a matter that is kept under review by the EPA.

5.9 Bio-Treatment Pre-Incineration

The submission asks that any requirement for pre-incineration biological treatment should have regard to Regional Waste Management Plans which set out preferred treatment plans and capacity requirements.

Comment: This is a matter that would be considered at planning and licence application stage for any incinerator. The waste pre-treatment obligations set out in the consultation document reflect national and EU policy. Regional Waste Plans, when devised, are required to reflect such policy. See also comment on Submission 4.8.

Submission #6 Brendan O'Neill DoEHLG

This submission was supported by an additional text received 10.11.08.

6.1 Legal Status of the Technical Guidance Note

The submission asks has the EPA considered the legal status of the proposed guidance document (i.e. consultation document).

Comment: The final MSW Pre-Treatment & Residuals Management Technical Guidance note is referenced in the Landfill BAT (completed final draft) and in the Waste Transfer/Treatment BAT Note (completed final draft). Waste minimisation (including recovery) is a key aspect of the national and EU legal concept of BAT. The proposed guidance is consistent with that policy. The guidance also gives effect to the first and fourth Strategy Principles as articulated in the *National Biodegradable Waste Strategy* (DoEHLG, 2006).

The EPA MSW Pre-Treatment guidance gives effect to the statutory obligations falling to landfill operators under Article 49(5) of the Waste Management (Licensing) Regulations 2004 (SI 395) by specifying how waste is to be treated prior to disposal in a landfill, as well as the associated obligations falling due under Article 6(a) of the EU Landfill Directive (1999/31/EC).

See also comments on Submission 19.6 below.

6.2 Gap Analysis Figures

The submission ask whether it would be useful to focussing the gap analysis presented in Figure 4 of the consultation note on the figures contained in the National Biodegradable Waste Strategy (NBWS). The submission also suggests the consultation note could draw stronger links with NBWS.

Comment: The gap analysis focussed on the most up to date figures which were not available at the time of the making of the NBWS (draft published in 2004, final published in 2006): the analysis therefore gives a more accurate estimation. The point of the cross reference to the NBWS and the guidance note is accepted. The links made on page 7 and 8 of the consultation note could be reinforced in the introductory and closing sections of the consultation note.

Recommendation

Introduce references to relationship between the NBWS and the EPA technical guidance in the introductory and closing sections. Introduce main strategy options Figure from NBWS to final text of EPA guidance.

6.3 Landfill Quota

The submission asks whether the EPA are considering introducing a quota system for biodegradable municipal waste acceptance at each landfill [trading allowances].

Comment: There are no plans to introduce a quota system. However individual licensees will be permitted to suggest co-operative arrangements to meet the biowaste obligations, and these arrangements will be examined by the OEE on a case-by-case basis.

6.4 Definitions

The submission asks whether EPA has considered the use of technical standards for residual waste, and also the merits of introducing definitions for residues for treatment activities ('rejects'). The submission also asks whether EPA have considered making a distinction between Treatment, Pre-Treatment and Resource Recovery.

Comment: At this time it is believed that the terms used in the guidance document as sufficient to facilitate its interpretation.

6.5 Figure 5

The submission suggests greater clarity would benefit Figure 5. For example the 3rd Bin issue appears at a 'lower level' in the schematic. This seems to de-prioritise this initiative.

Comment: Accepted.

Recommendation

Amend Figure 5 to clarify position of source segregated organics (3rd Bin).

6.6 Stabilization Standard

The submission asks if EPA has considered what threshold value of Oxygen Uptake Rate (OUR) might correspond to an AT4 of 10 and a DRI of 1,000 for stabilised biowaste.

Comment: The OUR is a measurement technique that is used for composting operations (high grade materials). The OEE advise that this method is based on a very small sample size. For bio-stabilised black bin residuals the OEE further advise that they will be relying on the AT4 and DRI sampling protocols as larger sample sizes are involved which is appropriate (more representative) for this heterogeneous material. It is this latter material that the stabilisation standard in the technical guidance speaks to. The AT4 test has associated ASTM / ISO methodology standards, and is the test favoured by the OEE. The DRI test is more expensive to conduct.

6.7 General Content, Style & Format issues

The submission makes a number of suggestions regarding content, linkages, style and format of the guidance note.

Comment: Noted. These were considered in the arrangement of the final text.

Submission #7 Ian Matherson of Flexus

This submission introduces a technology to bail waste for storage pending future submission to treatment/recovery/disposal operations.

Comment: Noted. This technology was referenced in the CEWEP submission.

Submission #8 Chartered Institute of Waste Management (Irish Branch)

Submission 8.1 Definitions

The submission seeks clarity in relation to definitions (e.g. biological waste), and asks for other definitions to be introduced (e.g. list pre-treatment technologies). In relation to Biowaste the submission asks for confirmation that Stabilised Biowaste will not be counted as Biowaste.

Comment: In relation to the term biological waste, the point is accepted. On the matter of listing treatment (and not treatment technologies), it is not considered necessary to document in this guidance note such matters. It will be for a licensee to demonstrate that the treatment technologies applied (whatever they may be) are appropriate (i.e. BAT) and effective at achieving the desired pre-treatment standards. The submission is correct in understanding that treated biowaste (stabilised to an agreed standard) will not be counted as biowaste in the landfill intake. Such matters will be articulated and clarified by the OEE in their forthcoming guidance on testing, validation and auditing protocols for waste pre-treatment verification. See also comments on Submission 10.1.

Recommendation

Replace reference to 'biological waste' with 'biowaste' in guidance document.

8.2 Figure 5 – 3rd Bin

The submission comments that the Figure 5 suggests that the '3rd Bin' biowaste once composted will not be placed on the market.

Comment: The text associated with the flow path for the 3rd Bin organics specifically states that compost from this process can be placed on the market, so long as such markets exist. A revision of Figure 5 to take account of previous submissions will help clarify this matter (c.f. Submissions 1.2, 2.1 & 6.5).

8.3 Validation of Treatment, Testing of Stabilization

The submission asks that further advice/guidance on testing, compliance parameters and enforcement policy for waste pre-treatment will be necessary.

Comment: Agreed. The EPA will be developing such advice and guidance. See comments on Submissions 1.4, 4.2 & 5.7 above.

8.4 Technological Choice

The submission believes that the EPA guidance should be left open so that future developments in treatment technologies can be accommodated.

Comment: Agreed, but subject to the application of BAT.

Submission #9 J Connolly for BnM

9.1 State Support

The submission believes that State Support will be necessary to ensure development to the necessary waste treatment/recovery infrastructure/markets.

Comment: This is a matter for DoEHLG. I am aware that the DoEHLG are investing €13M in a market development programme for recyclables.

Recommendation

Include note on this matter in letter to the DoEHLG as recommended in the comments on Submission 5.7.

9.2 Minimum Pre-Treatment Obligations for Landfill

The submission expresses concern regarding the ability of the sector to meet the obligation deadlines given the infrastructural deficit. In addition the submission questions the requirement for Solid Recovered Fuel (SRF) production from MBT operations.

Comment: It is understood that there is an infrastructural deficit. However for the first biowaste obligation deadline (2010) it is considered likely that the combination – nationally – of diversion to home composting programmes, the introduction of the 3rd Bin, existing and forthcoming biowaste treatment capacity, significant advances in removal of paper and card waste from landfilling (2nd Bin), and bans of sewage sludge in landfill, will ensure that the first target should be met. This will allow time (by 2013) to introduce a more extensive network of treatment facilities.

In relation to the SRF requirement in Figure 6 of the Consultation Document, the EU Commission and the EPA considered that BAT is to maximise energy recovery possibilities for residual wastes prior to landfill. The requirement to produce SRF is thus consistent with EU policy. This obligation is only relevant where there are industrial outlets for SRF as a fuel (see Recommendation for Submission 5.1 above).

9.3 Minimum Pre-Treatment Obligations for Incineration

The submission questions why incinerators are not required to have biowaste treatment as a mandatory pre-incineration step. The submission comments that this is contrary to BAT. In addition the submission comments that as the incineration operators are treating their residues (ashes) pre-landfilling then this obligation should not fall again to the recipient landfill operators.

Comment: Firstly it is important to note that from the perspective of the waste hierarchy, incineration with energy recovery is preferred over landfill. Incineration is not on a par with landfilling: incineration is accepted as a suitable pre-treatment technology for landfilling.

The requirement to biologically treat black bin residues prior to incineration may not be environmentally justified from an energy/resources balance perspective. This is why the consultation document suggest pre-incineration biological treatment of black-bin residues as not mandatory, and subject to individual site/project assessment. It is important to note that the pre-treatments for incineration activities will include the diversion of the 3rd Bin source segregated organics where such collection services exist (see Submissions 1.2, 2.1 & 6.5).

Whether the metals recover takes place pre- or post-incineration is not hugely environmentally significant. However, it is known that the metal in incineration ash residues is cleaner and easier to manage (see CEWEP submission, #5).

9.4 Validation of Treatment Effort

The submission welcomes the publication of a standard for stabilised biowaste, and also the commitment to periodically revisit the rationale articulated in the MSW Pre-Treatment guidance document.

The submission asks that consideration be given to the potential for co-operative arrangements in relation to the achievement of the pre-treatment obligations.

Comment: The OPA OEE have committed to consider co-operative arrangements as may be suggested, however any agreement of such will be subject to satisfactory compliance and nuisance control at the relevant landfill(s) included in the co-operative arrangement.

9.5 Implementation

The submission requests that they have an opportunity to see and object to any conditions likely to be placed in licences to effect the pre-treatment obligations. It is also requested that all landfill licences be fitted with these conditions simultaneously.

Comment: The EPA is currently considering how to progress the fitting of the licence conditions (Technical Amendment or Review). In either case the licensee will be notified in advance of our intention and may request that the Review process is used (as this allows for objections). The Review process opens the licence up to public participation.

9.6 Enforcement

The submission asks that the EPA OEE consult with them in relation to the enforcement policy for the waste pre-treatment initiative (measuring, auditing, testing, etc.,).

Comment: Accepted. Refer comments on Submissions 1.4, 4.2 & 5.7 above.

Recommendation

OEE to consider consulting with waste industry in relation to waste pre-treatment enforcement policy.

Submission #10 Cré (Composting Association of Ireland)

10.1 Definitions

The submission comments that the term 'stabilised biowaste' may lead to misinterpretation and suggest the term 'Stabilised Residual Waste' (SRW).

Comment: It is accepted that the term 'stabilised biowaste' though commonly used is open to misinterpretation. The suggested replacement also has some challenges, as it could refer to material that has been chemically or physically stabilised too. It is therefore suggested that the term 'bio-stabilised residual waste' is used to describe the biologically stabilised residues from black bin processing (as compared to compost, which is the term used for biologically treated source segregated biowastes).

Recommendation

Replace term 'stabilised biowaste' with the term 'bio-stabilised residual waste'.

10.2 Stability Testing

The submission makes recommendations as to which test method should be used to evaluate the stability of the bio-stabilised residual waste.

Comment: Refer comments on Submission 6.6 above. The sampling and testing protocols necessary to validate the stability standard will be addressed by the OEE in their enforcement guidance for these operations.

10.3 Stability Standard & Landfill Behaviour

The submission introduces the German, Austrian & Italian stability standards (5mg O₂/g DM, 7mg O₂/g DM and 1,000mg O₂/kg VS/h respectively), and suggests that the EPA adopt the either the German or Austrian standard. The submission comments that the German standard (AT4 of 5mg O₂/g DM) will result in a reduced biodegradability of 80% to 90%. Cré suggest that the 10% to 20% not stabilised should be factored into the biodegradable side of the accounting system. The submission suggests that where biodegradable waste diversion is in place then the standard of stabilisation could be relaxed to 7mg O₂/g DM.

In addition the submission stresses the difference between the stability requirements for a high grade compost (from source segregated materials) and the bio-stabilised residues from black bins. The latter needs a tight standard so-as to reduce leachate and gas production potential in a landfill.

Comment: The standard proposes to be used in Ireland (10mg O₂/g DM) is also reported to be used in Italy, France and Finland¹. It is not considered appropriate to operate two standards simultaneously. In accordance with the Government Circular (WPPR 17/08) source segregated separate collection of biowaste will have to be rolled out across the country. I understand from discussion with the Department that a Statutory Instrument will issue in respect of this requirement. So the advantage of different standards is moot. The standard of 10mg O₂/g DM is thus considered appropriate in the immediate to mid term, and the higher standard placed as a long ambition in accordance with the principles of BAT.

See also comments on Submissions 5.8 & 6.6.

The OEE will be producing guidance on the testing and validation of stabilisation, as well as the audit methodology to be used for calculation/verification of diversion/treatment.

As regards the second matter it should be stressed that the standard specified in the EPA consultation document is only for the bio-stabilised residues of black bin waste treatment. The current STRIVE project being undertaken by Cré will yield standards for high grade compost.

10.4 Sampling

The submission makes some suggestions in relation to sampling for stabilisation testing.

Comment: This is a matter for OEE to consider in their verification guidance. The OEE have been copied in on all the submissions.

Submission #11 M Joyce for Connacht Waste Management Region

11.1 Landfill Capacity

The submission comments that the availability of excess and cheap landfill capacity is skewing the market and undermining treatment/recycling efforts.

Comment: The DoEHLG are in the process of developing tiered landfill tax bands which will act to incentivise pre-treatment/diversion away from landfill. As to the matter of national capacity, EPA data suggests that the State will run out of landfill capacity in the period 2016 to 2018 (based on EPA statistical data for 2006 & ISus projections).

11.2 The 2 Bin & 3 Bin system & Existing Achievements

The submission observes that the consultation note places too much emphases on MBT and not on diversion via existing 3-Bin systems. MBT may not be needed. The EPA proposals [as perceived] may undermine existing source segregation achievements.

¹ Müller & Bulson (2005). *Stabilisation and Acceptance Criteria of Residual Wastes - Technologies and their Achievements in Europe*. Conference “The Future of Residual Waste Management In Europe” 2005

Comment: It is accepted that Figures 5 and 6 and the text of the minimum pre-treatment section could be improved to emphasise the role of the 3 Bin system (source segregated biowaste). This matter was also raised in submissions 1.2 and 2.1 above. It is almost certain that a widely penetrated source segregation (for organics) system involving home composting and a third bin system along with diversion of recyclables such as paper and card, should be sufficient to ensure a region/district, meets the 2010 obligations for biowaste diversion. The achievement of the 2013 will be a greater challenge and the achievement of the 2016 standard will not be possible without biological treatment of the black-bin residues. The submission is correct in the short term, and will have the ability to demonstrate to the OEE achievement of the requisite diversion/treatment obligations without the need for MBT. See also Submission 11.1.

Arising out of recommendations from other submissions Figures 5 and 6 have been re-crafted to address the point made.

11.3 Animal By-Product Regulations (ABP Regulations)

The submission comments that compliance with legal requirements under the ABP Regulations has the potential to delay implementation of the pre-treatment obligations.

Comment: It is recognised that there are concerns within DoAFF regarding the adequate treatment of biowaste containing ABP (e.g. catering wastes). The DoAFF have recently produced (11/11/08) draft technical guidance for the operation of biogas plants and composting plants. The standards expressed in these documents are very high, and may be too ambitious for bio-stabilised residual waste intended for landfill (as opposed to compost intended for use on land in association with agricultural activities). The EPA need to work closely with DoAFF to ensure EPA BAT and the DoAFF requirements are carefully aligned. Moreover the EPA (or Local Authority as appropriate) should attempt to stitch into its licences the DoAFF requirements so as to avoid multiple permitting – and thus potential for delay – in delivery of critical infrastructure. The OEE may also wish to consider joint inspections. And delays in DoAFF approval of plants may compromise Ireland’s ability to achieve the Landfill Directive obligations.

Recommendation

EPA (OCLR Licensing Unit & OEE) to arrange meeting(s) with DoAFF and DoEHLG to discuss synergies and modes of co-operation/liaison in relation to specification of technical standards, authorisation, and enforcement. The ABP regulations should be referenced in the EPA pre-treatment document.

11.4 Rural / Urban issue

The submission observes that the distinction between urban and rural is not clear and not significant in practice.

Comment: Accepted, text of final guidance note amended. See comments on Submission 4.4 above.

11.5 Waste Collection Permits

The submission notes that Local Authorities have the powers under the Collection Permit Regulations to control collection services such that biowaste is separately collected and treated. Additional controls are not needed.

Comment: Noted. The EPA pre-treatment document establishes the standards that landfill operators have to comply with and does not speak directly to waste collectors.

11.6 Infrastructure Deficit

The submission comments that time will be needed to get some of the necessary infrastructure in place, particularly where DoAFF are involved (ABP).

Comment: Noted. See comments on Submission 11.2 too. Figure 5 and the text of the *Minimum Pre-Treatment Obligations* section of the guidance have been amended to reflect that the desires treatment obligations and flows are in the short term at least dependent of provision of infrastructure.

Submission #12 J O'Donoghue for Midlands Regional Waste Management Steering Committee.

12.1 The 2 Bin V 3 Bin issue

The submission is concerned that the guidance may undermine the 3 Bin system.

Comment: The text of the final guidance note has been clarified in respect of its support for the 3 bin system. See Comments on Submissions 11.1 and 11.2.

12.2 Control of Customers

The submission raises concerns regarding the ability to control customers (i.e. waste entering the site) from the point of view of treatment effort. The submission identifies customers who are not on a collection scheme and bring their own waste to a landfill facility.

Comment: See comment on Submission 1.1. If a landfill operator does not have adequate pre-treatment facilities at a landfill, they will have to direct non-pre cleared waste (untreated) to an appropriate facility, or accept it, bulk it up and send off site for treatment, prior to eventually accepting residues for disposal. Landfill conditions will prohibit the acceptance of un-treated waste at the facility for direct disposal.

12.3 Urban – Rural issue

The submission questions the urban rural differentiation in the guidance document.

Comment: Accepted. See Comment on Submission 4.4 above.

12.4 Infrastructural Deficit

The submission comments that they do not have the resources to provide the necessary pre-treatment infrastructure.

Comment: It is reported that the the composting sector is rapidly developing its capacity to treat biowaste. Moreover the EPA is aware that the rendering sector have a reported capacity of 400,000tpa for biowaste treatment. See also comment on Submission 11.2 and 11.6 above.

12.5 Validation of Treatment Effort

The submission raises some questions on the validation of treatment.

Comment: These are matters that the OEE will clarify in forthcoming protocols, etc.

12.6 Landfill Gas Utilisation

The submission comments that the pay-back time for landfill gas utilisation investment is 10 years. If the organic waste is removed there will be no payback.

Comment: This is a significant point and will be one of the main implications of the pre-treatment obligations as implemented in the coming years. Landfill gas production rates for a typical tonne of MSW will decrease sharply as a consequence of diverting dry recyclables and source segregated biowaste, and stabilising the residuals. Landfills will likely not have sufficient gas to justify investment in power generation. An extraction system and flare stack will still be required to deal with the small amounts that will be generated. Indeed, between now and 2016, it may make sense for some operators to concentrate the stabilised waste in dedicated cells and any non-stabilised material to be placed in a separate cell. This would permit an efficient use of gas extraction infrastructure (more intense for gassing cells). Moreover the stabilised waste cells will have greatly reduced aftercare requirements. The mixing of small percentages of untreated waste accepted, and the treated waste is not likely to be the most efficient from a leachate and gas management perspective (unnecessarily lengthens the aftercare period). This will be a matter for OEE to agree with operators as part of the Specified Engineering Works or future phasing agreements for landfills. It should also be reflected in any landfill operational guidance.

Submission #13 D Holland for South-East Waste Management Region.

13.1 Required Infrastructure

The submission notes that the pre-treatment technologies required will in themselves produce emissions, will create concern, and will require planning permission. Also, there is no guarantee that sufficient capacity will be brought forward: moreover the markets for the diverted recyclables is far from secure.

Comment: Noted. See comment on Submissions 11.2 and 11.6 above. The point in relation to the lack of markets for source separated collected recyclables is a significant one. Currently this market has collapsed. If it does not pick up in the next year, it may be necessary to consign these materials to energy recovery or landfill.

13.2 MRF V MBT

The submission questions the association between MRFs (Materials Recovery Facilities) and MBT (Mechanical Biological Treatment) units.

Comment: It is a common misconception that a MRF does not include a biological component, or deal with black bin wastes. It is accepted that some MRFs deal exclusively with dry recyclable, however others (so called dirty MRFs) deal with residual wastes. Many of these plants can also have associated composting or stabilisation cycles. In the context of the EPA guidance the difference is not significant.

13.3 Direction of Waste

The submission comments that the Waste Collection Permit system may need to be used to ensure collected waste is appropriately treated.

Comment: Noted.

13.4 Pre-incineration Biological Treatment

The submission questions the impression that biological treatment is not required pre incineration, and that it may need to be directed to appropriate pre-treatment.

Comment: Source segregated biowaste (3rd bin) will not as a matter of normal course be permitted to go to incineration. The text of the guidance document has been amended to reinforce this.

13.5 Economies of Scale

The submission notes that landfill with small intake may suffer from economies of scale in relation to provision of infrastructure.

Comment: Accepted. See also comments on Submission 6.3.

13.6 Terminology

The submission queries some of the terminology used.

Comment: Noted. Text of guidance has been updated.

Submission #14 P King for Limerick/Clare/Kerry Waste Management Region.

14.1 The MBT V 2 Bin V 3 Bin issue

The submission notes that the consultation document may be interpreted to suggest that MBT is preferred over source segregation, and that the 3 Bin system might be undermined.

Comment: Accepted. The revised text of the guidance document address this perceived weakness. See also Comments on Submissions 11.1 and 11.2.

14.2 Value of Dirty MRFs, and value of stabilisation

The submission expresses concern about the role of dirty MRFs in the waste recovery industry. In addition the submission questions the value of stabilising residuals from MBT as there are no markets and it is going to landfill.

Comment: There is a definite role for facilities that take the 'black bin' residues to extract any metals or material that has an energy production potential (SRF), provided there is an outlet for such fuels. In relation to the bio-stabilised residues (from MRF/MBT processes), the purpose of this process prior to landfill is to ensure compliance with the landfill directive diversion obligations and to reduce the landfill gas and leachate production potential.

14.3 Collection Opt-outs

The submission notes that those who opt-out of formal collection services and who take waste direct to landfills impact on the economics of the multi-bin collection services. The submission suggests that the banning of direct disposal to landfill would address this.

Comment: The existing pre-clearance and pre-treatment conditions in EPA licences for the MSW landfills can be used to prohibit deposit of untreated waste at landfill. Such material could be directed to a Civic Amenity facility instead, and from there to treatment. See comments of Submission 12.2 above.

14.4 Residues from Thermal Treatment

The submission comments that the guidance document should set out obligations for the management of residues from thermal treatments such as pyrolysis and autoclave.

Comment: All pre-landfill and pre-incineration (where it exists) technologies will produce emissions and residues in their own right. If a landfill or an incinerator is to accept these residues for further treatment/final disposal, the burden will be on them to demonstrate to the EPA that the treatments are appropriate and sufficient to meet the obligations set out in the Landfill Directive and in the relevant sectoral BAT.

Submission #15 E Walsh for Louth county Council.

15.1 Landfill Obligations

The submission argues that the Landfill Directive does not place obligations on landfill operators to pre-treat waste as set out in the EPA guidance. The suggestion is that the obligation is for the Member State itself. The submission suggests that a quota system could be operated.

Comment: The basis for applying the pre-treatment obligations on those who receive the waste is established in the first three pages of the guidance note. The EPA MSW Pre-Treatment guidance gives effect to the statutory obligations falling to landfill operators under Article 49(5) of the Waste Management (Licensing) Regulations 2004 (SI 395) by specifying how waste is to be treated prior to disposal in a landfill, as well as the associated obligations falling due under Article 6(a) of the EU Landfill Directive (1999/31/EC). In relation to biodegradable waste, co-operative arrangements can be entertained (see also comments on Submission 6.3 and 19.6).

Local and Regional Waste Authorities have the ability through Waste Plans and the Collection Permit system to establish frameworks and measures that will assist in delivering the appropriate pre-treatment infrastructure and practices.

15.2 Statistics

The submission comments that in light of the economic down-turn the statistical basis for the diversion obligations will have to be examined.

Comment: Accepted. The guidance document includes a comment to that effect.

15.3 The 2 Bin V 3 Bin issue

The submission comments that the guidance seems to undermine the 3 bin system.

Comment: This issue has been clarified in the revised text for the guidance. See comments on Submissions 11.1 and 11.2 above.

15.4 Verification of Pre-treatment

The submission comments that it is unreasonable and un-workable for a landfill operator to verify that waste arriving has been adequately pre-treated.

Comment: The existing conditions in EPA landfill licences make waste pre-clearance obligation mandatory. The landfill operator will have to ensure that waste is only accepted from facilities or services where appropriate pre-treatment effort is delivered. See also comments on Submissions 1.1 and 12.2 above. Note too, Article 49(5) of the Waste Management (Licensing) Regulations 2004 (SI 395).

15.5 Treatment of non MSW

The submission make an important point regarding the measures and guidance necessary for pre-treatment of wastes not derived from the MSW stream, e.g. industrial wastes.

Comment: Such wastes will be subject to the standard waste acceptance/pre-clearance obligations articulated in all landfill/incinerator licences. This process will have to determine if adequate pre-treatment has been applied, and the landfill operators who accept the waste will have to demonstrate this to the EPA when asked.

Submission #16 PJ Howell for Fingal county Council.

16.1 Burden on Landfill Operators

The submission comments that the obligation placed on the landfill operators to demonstrate adequate pre-treatment is unreasonable.

Comment: See comments on Submissions 15.1 and 15.5 above.

16.2 MBT V 2 Bin V 3 Bin

The submission comments that the text of the guidance suggests that even where there is a 3 bin system, MBT will be required. This will be cost prohibitive, and may undermine the value of a 3 bin system.

Comment: EPA support of the 3 bin system has been clarified in the final text. See comments on Submissions 11.1, 11.2 and 14.2 above.

16.3 Urban V Rural issue

The submission queries the basis for distinguishing between rural and urban waste streams.

Comment: Accepted. See Comment on Submission 4.4 above.

16.4 Treatment of Incinerator Ashes

The submission suggests that this requirement be dropped as the quantity of metals will be low – not cost effective.

Comment: This would not be the international experience. See also the submission by CEWEP on this point. Bottom ashes can in certain circumstances also be processed for use in aggregates and concrete.

Submission #17 R Feely for Engineers Ireland.

17.1 Waste Recovery V Disposal

The submission comments that there is no clear reference in the guidance document that Incineration with energy recovery can be classed as Recovery, and not Disposal.

Comment: Whether an activity is classed as recovery or disposal is not a key matter for this document. That said, the guidance document does note that incineration with energy recovery is preferred to landfill, and the pre-treatment ambitions differ due mainly to the energy recovery element of incineration.

17.2 Pre-incineration Biological Treatment

The submission believes it is unreasonable to have an unclear statement that biological treatment may be required pre-incineration. This lack of clarity may impact on project finance.

Comment: The requirement for pre-incineration biological treatment would primarily be dictated by the Regional Waste Plan objectives and any unique aspects of the facility. Such decisions are generally explored with the competent authorities at pre-application & pre EIS scoping meetings. So an applicant should know in advance. This obligation is not given as mandatory in the guidance, it is an exception and will generally be driven by the unique needs of a project proposer. That said, the guidance has been clarified to note that where a source separated biowaste collection service exists this material should be diverted from incineration. See also comments on Submission 4.8.

17.3 Urban area definition

The submission comments that there is no definition of an urban area.

Comment: The Ministerial Circular WPPR 17/08, in the context of waste collection services, defines urban as >1,500 population. See comment and recommendation for Submission 5.5.

17.4 The 2 Bin system

The submission asks whether it is the minimum requirement to have a 2 bin system in sparsely populated areas.

Comment: If a 2 or 3 bin system is not in place, all waste collected will have to be subjected to pre-treatment prior to landfill. See comments on Submissions 2.1 and 4.4.

Submission #18 L Horan for CCMA

This submission includes a lot of the same comment submitted by the individual Local Authority bodies or Regions.

18.1 Guidance

The submission believes that further guidance will be required on how to treat, and for landfill operators regarding implementation.

Comment: Landfill operators for 'existing' landfills committed in 2002 that they would meet the Landfill Directive. Implementation should be well advanced. Further guidance will issue from the OEE in relation to sampling, testing, validation and audit protocols, necessary to demonstrate compliance.

18.2 Site, Regional or National Target

The submission suggests that flexibility will be necessary as the targets are a national obligation. The submission believes that the Regional Waste Plans are a better method of ensuring treatment of appropriate waste streams, and that EPA and Local Authorities should have the power to direct waste.

Comment: The basis for applying the pre-treatment obligations on those who receive the waste is established in the first three pages of the guidance note. See also comments on Submissions 6.3 and 15.1.

18.3 Economies of Scale

The submission suggests that efforts to ensure compliance with the EU obligations should have regard to economies of scale.

Comment: Noted. This will be a matter for OEE in implementation of an enforcement policy for the pre-treatment initiative. See also comment on Submission 6.3.

18.4 Interpretation

The submission asks if the interpretation of the levels of treatment (50%, 70% etc) will be based on total arisings or on that material arriving at a landfill. The submission also asks if there is an offset ability (allowance trading), and if the statistical projection take into account economic cycle.

Comment: It will be based on the material accepted at landfill. This will be clarified in OEE guidance. On the matter of trading see comment of Submission 6.3. The guidance document comments that it will be subject to periodic review (taking account of updated statistics, etc.).

18.5 Figure 5

The submission notes a miss-match between Figure 5 and the text.

Comment: Noted. Figure and text revised.

18.6 The 2 Bin V 3 Bin V MBT issue

The submission asks if MBT is required where a 2 or 3 bin system exists.

Comment: Treatment (including biological) will be required on the 'black bin' residual from a 2 or 3 bin system in order to achieve the 2016 biodegradable waste diversion obligations. See also comment on Submissions 11.1, 11.2 & 14.2 above.

18.7 MBT V MRF

The submission suggests that a MRF is distinct from MBT and the EPA guidance should reflect this.

Comment: It is a common misconception that a MRF does not include a biological component, or deal with black bin wastes. It is accepted that some MRFs deal exclusively with dry recyclable, however others (so called dirty MRFs) deal with residual wastes. Many of these plants can also have associated composting or stabilisation cycles. In the context of the EPA guidance the difference is not significant.

18.8 Terminology

The submission queries some of the terminology used.

Comment: Noted. Text of guidance has been updated.

18.9 Waste Acceptance

The submission comments that it is difficult for landfill operators to confirm if all deliveries have been adequately pre-treated. What is to be done about delivered for those opting out of collections? The landfill operators are not involved in collections, so why are they required to demonstrate pre-treatment.

Comment: Operators of landfills have to ensure – as part of their legally binding waste acceptance obligations – that waste is adequately pre-treated prior to acceptance. See also comments on Submissions 1.1, 12.2 and 15.1 above.

18.10 Enforcement Policy & Incentives

The submission queries how enforcement of the pre-treatment obligations will be effected. What incentives are available to encourage pre-treatment.

Comment: The EPA OEE will in 2009 develop their enforcement policy in respect of this initiative, which will include publication of guidance as may be appropriate. See comments on Submissions 4.2 & 5.7 above.

18.11 The 2 Bin V 3 bin V MBT issue.

The submission comments that the text of the guidance suggests that even where there is a 3 bin system, MBT will be required. This will be cost prohibitive, and may undermine the value of a 3 bin system, and is contrary to the DoEHLG Circular WPPR 17/08.

Comment: The text of the final guidance has been clarified to ensure the 3-bin systems are not undermined. Also treatment (including biological) of the residual

'black bin' from a 3 bin system will be required in order to ensure achievement of the 2016 obligations. See also comments on Submissions 11.1, 11.2 and 14.2 above.

18.12 Urban Rural issue

The submission queries the basis for distinguishing between rural and urban waste streams.

Comment: Accepted. See Comment on Submission 4.4 above.

18.13 Treatment of Incinerator Ashes

The submission suggests that this requirement be dropped as the quantity of metals will be low – not cost effective.

Comment: This view is not supported the WtE sector. See comment on Submission 16.4.

Submission #19 M Heavey for Greenstar

19.1 Biological treatment pre-incineration

The submission questions the apparent omission of biological treatment/including diversion of biodegradable wastes pre-incineration, and comments that the EPA proposals undermine the waste hierarchy for a range of recyclables.

Comment: See comments on Submissions 4.8, 9.3 & 11.2. The importance of diversion of source segregated and other recyclables from incineration is reinforced in the revised text of the guidance.

19.2 SRF issue

The submission questions why SRF production is not applied to pre-incineration treatments. In addition the submission comments that there is little guidance on SRF standards. The submission comments that 'dirty' MRF/MBT plants can produce alternative products to SRF production.

Comment: See comments on Submissions 5.1 and 9.2. The EPA will be happy to see market uses for MRF/MBT residuals that would be higher up the waste hierarchy than Incineration with energy recovery, and Landfill. Operators can introduce these to the EPA OEE for agreement as they arise.

Recommendation

Introduce option for 'Other' recyclable/products from MBT/MRF plants in Figure 6 (now Figure 7) of the guidance document.

19.3 Economic Incentives for delivery of Obligations

The submission comments that economic incentives to foster development of a recycling infrastructure are absent.

Comment: This is not a matter the EPA can advance through its pre-treatment guidance. See also comments on Submissions 5.7 and 9.1.

19.4 Evidence to meet obligations

The submission comments that there is no evidence to suggest that Ireland can meet 2010 obligations with existing infrastructure and roll-out of 3rd bin system

Comment: In 2006 c.866,000t of BMW was landfilled, some 455,000t short of the 2010 obligation (at standstill production). The EPA guidance note sets out the gap analysis (what BMW is produced and the amount allowed to landfill in 2010), see figures 4 and 5 of revised text. Significant improvement in infrastructure and source segregated collections have been made in the two years since the last waste statistical survey (2006). These improvements are expected to continue, and be aided by the incentives identified in comments on submissions 5.7 and 9.1, as well as on foot of the Government Circular on the separate collection of organics. The next statistical survey year will assist in sharpening focus.

19.5 Landfill capacity

The submission comments that landfill numbers are limited, and that in order to avoid fines (for exceeding biowaste obligations), some landfills may opt to restrict intake or close, thereby creating a national crises (as there are no alternative solutions). The submission comments that in such a case the strict application of the waste acceptance standards and penalising those who accept the excess wastes (as BPEO) would not in their view be BAT.

Comment: Concerns noted. The EPA will assist in any response to such an eventuality, if arising. The EPA has the ability to look at the biowaste diversion/treatment obligations from a regional/national accounting basis.

19.6 National V Landfill Obligations

The submission comments that the BMW obligations are national (external to landfill). The submission comments that the EPA approach is different to that in other member states (specifically UK), and may be unlawful. The submission comments that diversion policies in Europe are supported by infrastructure.

Comment: See comments on Submissions 6.1 and 15.1 above. There are other member states that adopt the EPA proposed 'at landfill' restrictions for pre-treatment/diversion of biowastes (e.g. Germany & Austria). The EPA is confident that the approach it is adopting is legitimate, as well as consistent with National and EU policy, BAT and regulatory provisions.

There is a national strategy on biodegradable waste diversion from landfill (DoEHLG, 2006). This broad strategy is not the responsibility of the landfill operators. However landfill operators are responsible for what is disposed to their landfills, and EU law places limits on the amount of BMW that can be disposed to landfill. The EPA MSW Pre-Treatment guidance gives effect to

the statutory obligations falling to landfill operators under Article 49(5) of the Waste Management (Licensing) Regulations 2004 (SI 395), by specifying how waste is to be treated prior to disposal in a landfill, as well as the associated obligations falling due under Article 6(a) of the EU Landfill Directive (1999/31/EC). Moreover, Section 41(2)(a)(i) of the Waste Management Acts 1996-2008 permits the EPA to attach conditions to a licence that relate to the types of waste to be accepted. I would also draw attention to Article 3(i) of the Waste Management (Licensing) Regulations 2004 (SI 395).

Waste minimisation (including recovery) is a key aspect of the national and EU legal concept of BAT. The proposed guidance is consistent with that policy. Under Section 40(4) of the Waste Management Acts (WMAs) the EPA is prohibited from granting a waste licence unless it is satisfied that:-

(bb) if the activity concerned involves the landfill of waste, the activity, carried on in accordance with such conditions as may be attached to the licence, will comply with Council Directive 1999/31/EC on the landfill of waste,

and,

(c) the best available techniques will be used to prevent or eliminate or, where that is not practicable, to limit, abate or reduce an emission from the activity concerned.

The pre-treatment guidance also gives effect to the first and fourth Strategy Principles as articulated in the *National Biodegradable Waste Strategy* (DoEHLG, 2006). The EPA in exercising its functions under the WMAs in relation to assessing a waste licence application is required to have regard to *the policies and objectives of the Minister or the Government in relation to waste management for the time being extant* (c.f. Section 40(2)(iv) of the WMA). The EPA waste pre-treatment guidance also assists in delivering on Member State obligations articulated in Article 22 of the revised Waste Framework Directive 2008/98/EC.

Greenstar will have an opportunity to object to the pre-treatment conditions for its licences should it wish so, and to appeal the legality of these to the Courts if necessary.

Infrastructure in Ireland will improve as a consequence of existing and planned Government policy and EPA actions. The rendering association of Ireland have indicated that there is up to 400,000tpa capacity for biowaste treatment at their facilities. The EPA did not opt for the higher stability standard employed in German & Austria so-as, amongst other matter, maximise efficient use of existing infrastructure.

19.7 Consultation with DoEHLG

The submission asks that all submissions received in relation to the consultation be forwarded to the Department.

Comment: Noted.

19.8 Standards & Enforcement

The submission believes it essential that the EPA publish guidance on standards, testing protocols, etc., in relation to verification of pre-treatment efforts. Any policy to restrict waste streams into landfill have to be made in concert with the availability of alternatives.

Comment: The OEE will be bring forward appropriate sampling & testing protocols and an enforcement policy for the waste treatment initiative.

Submission #20 W Phelan for RPS

20.1 The 2 bin, 3 Bin V MBT V biological treatments

The submission comments that the EPA guidelines may undermine the implementation of source separate collection and diversion. The submission comments that the EPA document does not differentiate between the different biological processes (MBT produces a poorer grade 'compost', so is it right that it should be preferred). The document should say that source separation may assist in meeting the 2010 deadline.

Comment: Accepted. Refer comments on Submissions 11.1, 11.2, 14.2 and 19.4 above.

20.2 Testing Standards

The submission comments that stability testing (AT4 and DRI) are costly, and that alternative tests should be possible.

Comment: Accepted. This is a matter that the OEE will address as part of their verification protocols. The AT4 test is a 4 day test, for ease of operation and enforcement there will have to be some rapid form of test that is benchmarked against the AT4 (spot checking for acceptance purposes).

20.3 Pre-incineration Biological Treatment

The submission comments on the apparent non-requirement for biological treatment/including diversion of biodegradable wastes pre-incineration.

Comment: See comments on Submissions 4.8, 9.3 & 11.2. The importance of diversion of source segregated and other recyclables from incineration is reinforced in the revised text of the guidance.

20.4 Targets Specified

The submission comments that the obligations specified in the guidance may be misunderstood. Do the diversion targets consider 3 Bin type diverted material?

Comment: See comment on Submission 18.4 above.

20.5 SRF V RDF

The submission states that RDF (a low specification refuse derived fuel) will be more likely than SRF.

Comment: This is a matter for the treatment of the 'black bin' residues of source separated collections in a region without a commercial incinerator, but where co-incineration is available or possible. The obligation is that the MRF/MBT unit, where technically possible, produce a fuel grade material of defined specification (SRF) so as to recover any energy potential in the residues prior to landfilling. See also comments on Submissions 5.1 and 9.2 above.

20.6 Relationship to Other Policy

The submission comments that the relationship between the EPA guidance and other national policy is unclear.

Comment: The EPA document articulates pre-treatment obligations for facilities it regulates. The legal and policy relationships as well as the basis for the guidance, have been further clarified been reinforced in the final text.

20.7 Statistics and Obligations

The submission comments that it is hard to reconcile the data in Figures 2 and 3 with the obligations specified in Figure 6.

Comment: It was considered that a clear individual numerical target was going to prove clearer to all stakeholders, investors and technology providers, and easier to measure & enforce. The individualisation approach gives each landfill (or co-operatives where proposed) the ability to see what proportion of the national responsibility will fall to them. The targets in Figure 6 are simply derived from a calculation of the BMW anticipated to be generated in the respective objective year (having regard to ISus predictions), and applying a factor to that so as to ensure that no more than the permitted amount is landfilled (as calculated from the base year, 1995). A margin for error/deviation is also included.

Submission #21 N Bond for Cork County Council

21.1 Source Separation V MBT issue.

The submission comments that studies show that source separation is environmentally superior to straight MBT/MRF. The bio-stabilised residues from MBT have limited applications.

Comment: Accepted. Refer comments on Submissions 11.1, 11.2 & 14.2.

21.2 Urban v Rural

The submission comments that the urban/rural issue may lead to anticompetitive behaviours.

Comment: The revised text of the pre-treatment guidance has eliminated this reference to an urban rural difference. See comment on Submission 4.4. above.

21.3 Landfilling

The submission comments that the option of landfilling municipal residual wastes [after source separated collections] is not allowed in the proposed guidance.

Comment: This is clarified in the final text and in the figures (c.c. Figure 7). See also comments on Submissions 11.2 and 11.6

21.4 Validation

The submission comments that clear inspection/validation guidelines are devised. The submission queries how the site/region specific aspect of validation will be achieved: will there be different standards.

Comment: See comment on Submission 4.2. In relation to the regional/site aspect, this point relates to the possibility of some landfill operators coming together in a co-operative that will ensure, as a collective, the individual obligations are met. This may mean that some of the individual sites in the collective will operate to lower standard and others to a higher one. Such arrangements will be for OEE approval.

21.5 Definitions & Terminology

The submission comments that the terminology in places is confusing/unclear.

Comment: Accepted. The revised text of the guidance addresses this point.

21.6 Test Delays

The submission comments that the testing regime for waste acceptance may result in intermediate handling issues.

Comment: EPA OEE guidance will assist interpretation of these conditions. See comments on Submissions 1.1, 12.2 and 20.2 above.