

17<sup>th</sup> February 2005

Circular Letter: WSP1/05

*To Each Sanitary Authority*

**RE. MANAGEMENT OF WATER TREATMENT SLUDGES**

This circular requests sanitary authorities to review the legal and regulatory regime and the management options for water treatment sludges.

The Client's Representative (RPS-MCOS Ltd) on Limerick City Council's Clareville Water Treatment plant Refurbishment Contract, have conducted a review of this matter and have produced a report on their findings. The Report reviews current practices and disposal options, legal requirements and the need to evaluate alternative options for cost effective reuse or disposal of water treatment sludge. The document addresses all of the relevant issues on this matter and is now enclosed as guidance for sanitary authorities.

EPA Recommendations

The Environmental Protection Agency in their report on "The Quality of Drinking Water in Ireland - A Report for the Year 2003 with a Review of the Period 2001 – 2003" makes recommendations as to the management of water treatment sludge as follows:-

- "1. All sanitary authorities should review current methods of handling and disposal of water treatment sludges to ensure that current practice is not in contravention of the Waste Management Act, 1996.*
- 2. The discharge of water treatment sludge to receiving water, where practised, should cease immediately. The disposal of sludge is a licensable activity under the Waste Management Act, 1996.*
- 3. The mixing of water treatment sludges with sewage sludge for subsequent spreading on land is not permitted under the Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998. Such practices should cease immediately as this practice does not constitute recovery."*

The guidance documents considers a range of issues including:

*1. Legislative Background*

The detailed review of existing legislation and associated regulations demonstrates that water treatment sludge is classified as a waste, the management and disposal of which must be carried out in compliance with the Waste Management Act, 1996, its associated amendments and regulations.

Accordingly, management and disposal arrangements are subject to licensing or permitting, depending on the nature of the activities and their scale. As water treatment sludges do not appear on the hazardous waste list nor do they contain any of the properties listed in the Second Schedule of the Act, they are considered non-hazardous.

### *2. Water Treatment Sludge Volume Reduction*

Optimisation of water treatment plant operation is recommended as a best practice approach to production of potable water from the point of view of water quality, optimisation of chemical input and sludge quantities. Sludge volume reduction should be promoted as far as practicable to suit the end disposal route. This will involve gravity thickening, combined with dewatering by an appropriate technology, to minimise the end volume and improve stability and handleability.

### *3. Discharge of Water Treatment Sludge*

Direct discharge of water treatment sludge or filter washwater to water bodies is not acceptable; in accordance with the EPA recommendation, such discharges should cease immediately.

Discharge of liquid water treatment sludge or filter washwater to the public sewerage system is classified as a trade effluent and may be an efficient method of dealing with the waste stream, subject to appropriate conditions and licence requirements and having regard to the capacity of the network and the downstream wastewater treatment plant. This practice should not compromise the re-use of sewage biosolids in agriculture provided the relative loading of water treatment sludge solids to the ultimate solids output of the waste water treatment plant is limited to at most 20%. At these levels, the water treatment sludge is unlikely to cause any operational problems within the wastewater treatment works. If the end disposal of the sewage sludge is to landfill, incineration or other outlet not likely to impact on the natural environment, then consideration can be given to relaxing these constraints. In that event, any constraints should be determined from a study of local conditions.

Ultimately, acceptability of this option will be determined in the same way as for any industrial/trade waste having regard to the volume and characteristics of the discharge, its implications for the wastewater collection and treatment systems and for the ultimate disposal of wastewater treatment sludge.

### *4. Recovery/Recycling*

The options for recovery/recycling of water treatment sludge are generally not well developed as economically viable options for application in Ireland at this stage.

### *5. Landspreading*

Water treatment sludge has no proven beneficial re-use and consequently the landspreading of such sludge must be considered as a disposal activity and subject to licensing or permitting under the Waste Management Regulations. With appropriate environmental management conditions, the practice should not result in adverse environmental impact.

### *6. Landfill*

Water treatment sludge can be disposed of to licensed landfill, subject to the conditions of the landfill licence. An alternative may be to develop a dedicated

mono-fill for water treatment sludge where the scale and economics of this option justify a dedicated facility at a County or Regional level.

### Conclusion

Each sanitary authority should carefully consider local conditions in evaluating the most suitable option for disposal of water treatment sludge from each plant under their control having regard to the volumes and characteristics of sludges and the availability of suitable outlets and the requirements of the Waste Management Regulations.

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Liam Gleeson  
Water Services Policy Unit

To - Each County and City Manager and Director of Services (Water Services)  
Copy to – GCCC, CCMA, AMAI, WSNTG, Ombudsman's Office and Regional Authorities