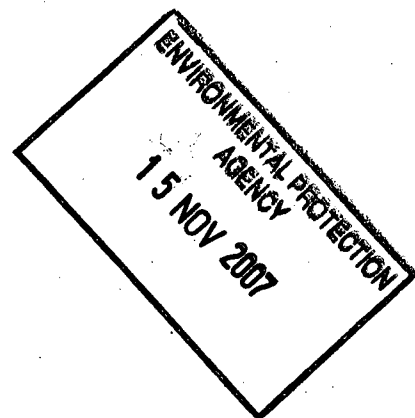




28 February, 1995

Ref : W.P. 3/95



Environmental Protection Agency Act, 1992 (Urban Waste Water Treatment) Regulations, 1994

A Chara,

1. I am directed by the Minister for the Environment to enclose a further copy of the above Regulations which were made on the 14 December, 1994. The Regulations give effect to provisions of the Urban Waste Water Treatment Directive (91/271/EEC).
2. The terms and requirements of the Directive were summarised in earlier circular letter L7/91 of 10 July, 1991, and the detailed provisions reviewed at an information seminar for senior technical/administrative local authority staff in October, 1991. (The proceedings of the seminar were circulated to each sanitary authority). The purpose of this circular is to briefly outline the main provisions of the Regulations and the implications for sanitary authorities.
3. Two general kinds of requirement are specified in relation to urban waste water control. The first relates to the provision of collecting systems and the second relates to the provision of an appropriate level of treatment.

Collecting Systems

4. Article 3 of the Regulations requires the provision of collecting systems for all agglomerations in excess of 15,000 p.e. by end December, 2000, for all agglomerations between 2,000 p.e. and 15,000 p.e. by end December, 2005, and for all agglomerations in excess of 10,000 p.e. discharging into a sensitive area by end December, 1998.
5. The requirements which apply to collecting systems are set out in the First Schedule which specifies that the design, construction and maintenance of collecting systems must be undertaken in accordance with the best technical knowledge not entailing excessive costs, notably regarding the following matters

- volume and characteristics of urban waste water



- prevention of leaks
 - limitation of pollution of receiving waters due to storm water overflows.
6. Sanitary authorities will be familiar with the design criteria relating to the first two items. Volume and characteristics used for design purposes should be carefully assessed to avoid entailing excessive costs, and have due regard to waste minimisation, water conservation, and be based on realistic projections. In this connection, the minimum setting for storm water overflows has traditionally been 6 x DWF. While it is now suggested that this be replaced by "Formula A" (see paper referred to in paragraph 7 below), only in special cases should this minimum setting be exceeded and these should be supported by economic and environmental analysis.
7. In the case of storm water overflows(SWO's), the Directive (footnote to Annex 1) requires Member States to draw up measures to limit pollution from such overflows, such measures to be based on dilution rates or capacity in relation to dry weather flow or to involve the specification of a certain number of overflows per year. The attached paper entitled "Procedures and Criteria in relation to Storm Water Overflows" outlines requirements and approach in this respect. Any queries on the paper should be addressed to Mr Gerry Galvin, Water Services Section, ext 2114.

Treatment Facilities

Secondary Treatment

8. Under article 4(1) of the Regulations, secondary treatment is the basic requirement for all waste water discharges. The deadlines (associated with agglomeration size) for provision of secondary treatment or an equivalent treatment are the same as for collecting systems except that secondary treatment is not generally required in respect of agglomerations below 10,000 p.e. discharging to coastal waters.
9. The only exception to the prescribed deadlines is where an extension of time may be agreed under article 8 of the Directive. A request under that article may only be made in exceptional cases where technical problems arise and for geographically defined population groups. Because an extension cannot run beyond end-December, 2005, this provision is only relevant to the 2000 deadline which otherwise applies to agglomerations in excess of 15,000 p.e.. Sanitary authorities are asked to examine the appropriateness of this provision to agglomerations in excess of 15,000 p.e. in their areas and to advise the Department if it is considered relevant in any particular case. Detailed work which would be necessary to support an application under article 8 should not be carried out prior to consultation with the Department.
10. Secondary treatment is defined in the Regulations as "treatment of urban waste water by a process generally involving biological treatment with a secondary settlement or other process in which the requirements established in Part I of the Second Schedule are respected." The requirements are for treated effluent concentrations not to exceed 25 mg/l for BOD, 125 mg/l for COD, and 35 mg/l for S.S. (suspended solids). The requirements for BOD and S.S. replace the

traditional "Royal Commission Standards" of 20:30 which, until now, have been used as standard practice in the design of waste water treatment facilities.

11. The standard for COD is a new requirement which, it is anticipated, should not present any special difficulties. Nevertheless, sanitary authorities are requested to take account of it in determining raw waste water characteristics, particularly where a high COD industrial wastewater is present.
12. It will be noted that Part I of the Second Schedule allows for the application of concentration values or percentage reduction. Given that traditional practice in Ireland has been based on concentration values i.e. the 20:30 standard, and that no special difficulty is envisaged in meeting the additional COD standard of 125 mg/l, the current practice of adopting concentration values should be continued unless, in particular circumstances, the option of percentage reduction may be more appropriate. Any proposal to adopt the latter option should be discussed and agreed with the Department.

Appropriate Treatment

13. While secondary treatment is not required under the terms of the Regulations in respect of agglomerations less than 2,000 p.e. discharging to freshwaters and estuaries and in respect of agglomerations less than 10,000 p.e. discharging to coastal waters, nevertheless appropriate treatment must be provided in these cases by end-December, 2005 pursuant to article 7 of the Regulations. Appropriate treatment is defined in the Regulations as the "treatment of urban waste water by any process and/or disposal system which after discharge allows the receiving waters to meet the relevant quality objectives and the relevant provisions of the Directive and of other Community Directives." This will vary from simple physical processes to physical/biological or physical/chemical processes with varying performance standards depending on the quality objectives of the receiving waters.

More Stringent than Secondary Treatment: Sensitive Areas

14. Under the terms of article 5 of the Directive, Member States are required to identify sensitive areas in accordance with the criteria specified in Annex II of the Directive. Following the assessment of these criteria, the evaluation of available information in relation to water quality, and consultation, as appropriate, with sanitary authorities, the water bodies listed in the Third Schedule to the Regulations were identified as sensitive on the grounds of eutrophication. They involve stretches of 6 rivers and 4 lakes which are in receipt of either direct or indirect discharges from agglomerations of 10,000 p.e. or more. The towns affected by these designations are listed in the Appendix to this circular.
15. Under article 4(2) of the Regulations, more stringent treatment than secondary treatment is required by end December 1998 in respect of all agglomerations in excess of 10,000 p.e. discharging into sensitive areas or into the catchment areas of sensitive areas where the discharges contribute to the pollution of these areas. Part II of the Second Schedule specifies the additional requirements appropriate to

such agglomerations. These requirements relate to reduction of phosphorus and/or nitrogen loads depending on the nature of the receiving waters. Phosphorus is normally the limiting nutrient in freshwaters with nitrogen the limiting nutrient in estuarine/coastal waters.

16. It will be necessary in the design of new or improved treatment facilities for the towns listed in the Appendix that account is taken of the above requirements. Relevant sanitary authorities will be aware of the current treatment facilities available in these towns and the implications which identification of the sensitive areas listed in the Third Schedule will have for future treatment requirements.
17. Article 4(4) of the Regulations provides for the non-application, in respect of individual treatment plants, of the treatment requirements associated with a sensitive area where a sanitary authority is satisfied that the minimum percentage of reduction of the overall load entering all urban waste water treatment plants in a sensitive area is at least 75% for the limiting nutrient. While it was necessary to legally transpose this provision of the Directive, it is unlikely to be relevant in an Irish context. This is emphasised by the fact that in 9 of the 10 areas identified as sensitive under the Regulations, only one agglomeration in excess of 10,000 p.e. is involved in each case (see Appendix).

Requirements with respect to other Directives

18. Article 5 of the Regulations provides that more stringent requirements than those specified in Parts I and II of the Second Schedule must be applied to discharges from a treatment plant where this is required to ensure that the receiving waters satisfy any other relevant Community Directives. Directives of immediate relevance in this regard are
 - (i) the Freshwater Fish Directive(78/659/EEC) - standards are set out in S.I. 293 of 1988,
 - (ii) the Shellfish Directive(79/923/EEC) - standards are set out in S.I. 200 of 1994,
 - (iii) the Bathing Water Directive(76/160/EEC) - standards are set out in S.I. 155 of 1992(note that both guide and imperative values are relevant),
 - (iv) the Surface Water Directive(75/440/EEC) - standards are set out in S.I. 294 of 1989.

In the design of schemes concerned, sanitary authorities should pay particular attention to ensuring compliance with the requirements/standards, as relevant, of the above Directives and implementing regulations and of relevant objectives in Water Quality Management Plans.

Other Requirements

19. Article 8 of the Regulations specifies provisions in relation to

- (i) the design, construction, operation and maintenance of treatment plants so as to ensure sufficient performance under all normal local climatic conditions
- (ii) the taking account of seasonal variations of the load when designing a treatment plant
- (iii) representative sampling of incoming waste water and of treated effluent
- (iv) locating the point of discharge of urban waste water so as to minimise the adverse effects on the receiving environment.

Most of the above requirements are fairly standard practice which should continue to guide the design of treatment plants so as to ensure that they operate efficiently and without adversely affecting the receiving environment. The implications of (iii) above are dealt with in paragraphs 20 - 24 below.

Monitoring Requirements

- 20. Article 10 and the Fifth Schedule of the Regulations cover the monitoring requirements of the Directive insofar as they relate to urban waste water. The need for sanitary authorities to develop monitoring programmes well in advance of implementation of the Directive was signalled in circular letter L7/91 of 10 July, 1991.
- 21. Article 10(1)(a) of the Regulations specifies requirements in relation to the monitoring of discharges from urban waste water treatment plants. The procedures/reference methods set out in the Fifth Schedule are self-explanatory and should be familiar to sanitary authorities. The monitoring requirements must be applied to both new plant and existing treatment plants where the latter are within the thresholds specified in Article 4 of the Regulations. Monitoring arrangements below these thresholds will be dictated by local circumstances e.g. quality of receiving waters, nature of effluent.
- 22. In the case of new plants, requirements as necessary should be incorporated at design stage. In the case of existing plants, sanitary authorities should ensure that any necessary improvements or modifications are made to current facilities or practices so that the monitoring requirements of the Regulations are met. The need for such improvements/modifications should be addressed by sanitary authorities when they are finalising their monitoring programmes under these Regulations.
- 23. Article 10(1)(b) of the Regulations requires that ambient monitoring be carried out of waters subject to a discharge from an urban waste water treatment plant where it can be expected that the receiving waters will be significantly affected. Sanitary authorities should make provision for such monitoring; needs in this regard may

already be met in many cases by meeting the requirements of other Directives, including those referred to in paragraph 18, or of relevant quality objectives in Water Quality Management Plans.

24. Article 8(3) of the Regulations requires that treatment plants shall be so designed or modified that representative samples can be obtained of the incoming waste water and of treated effluents before discharge to receiving waters. Given that concentration values will normally be adopted as opposed to percentage reduction values, sanitary authorities should use their own discretion on the need for, and level of, monitoring to be applied to incoming waste waters.
25. Under Section 61 of the Environmental Protection Agency Act, 1992, the Agency has a supervisory and reporting role in relation to the monitoring programmes carried out by sanitary authorities under these Regulations. As a consequence, sanitary authorities are required by Article 10(2) of the Regulations to transmit the results of monitoring, including monitoring of existing plants, to the Agency in such manner and at such times as the Agency shall direct. The Agency will be in touch with all sanitary authorities in the near future to advise them of its requirements in this regard. In the meantime, sanitary authorities should finalise their monitoring programmes necessary to give effect to the requirements of these Regulations.

Industrial Waste Water

26. The provisions of the Fourth Schedule require the application of pre-treatment to industrial waste water entering collecting systems and urban waste water treatment plants so as to ensure (i) the efficient and safe operation of collecting systems and treatment plants and (ii) the environmentally sensitive disposal of treated effluent and sludge. Under article 9 of the Regulations, sanitary authorities are required to take appropriate steps to ensure that the specific requirements of the Fourth Schedule are met. This should be done by way of attaching appropriate conditions to licences under the Water Pollution Acts in respect of discharges of industrial waste water into collecting systems and urban waste water treatment plants. **Existing licences must be reviewed, and, if necessary, revised, as appropriate, to ensure compliance with these requirements.** In addition, where the Environmental Protection Agency proposes granting a licence, or a revised licence, which involves a discharge of industrial waste water to a sewer, sanitary authorities should ensure that the requirements of the Fourth Schedule are also met in such cases by attaching appropriate conditions to their consents under the provisions of section 97 of the Environmental Protection Agency Act, 1992, .

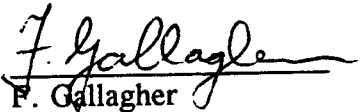
Sewage Sludge

27. Article 14 of the Directive requires Member States to provide for the control of the disposal of sewage sludge and to re-use it whenever appropriate. Specific legislative requirements in this regard will be addressed in the Waste Bill to be published shortly. Meanwhile, the obligation on Member States to publish situation reports on the disposal of sewage sludge under article 16 of the Directive,

places a responsibility on sanitary authorities to transmit relevant information to the Environmental Protection Agency, who will draw up the necessary reports. The Agency will be in touch with all sanitary authorities to advise them of its requirements in this regard.

28. Sanitary authorities will recall that, following publication last year of the Sludge Strategy Study, they were requested in circular letter L 6/94 of 2 June, 1994, to prepare a detailed sludge management plan for each sludge catchment area, or part thereof, within their areas and to liaise with the Department as necessary. Sanitary authorities are requested to submit to the Department, by 1 May, 1995, a short situation report on progress to date on the preparation of these plans.
29. Any queries in relation to this circular should be addressed to Mr. Tom Walsh, ex. 2317, or the undersigned.

Mise le meas,



F. Gallagher
Assistant Principal Officer
Water Quality Section
Ex. 2118

To each sanitary authority

APPENDIX

Sensitive Areas/Associated Towns

River Boyne, County Meath	Navan
River Camlin, County Longford	Longford
River Castlebar, County Mayo	Castlebar
River Liffey, County Kildare	Osberstown
River Nenagh, County Tipperary	Nenagh
River Tullamore, County Offaly	Tullamore
Lough Derg on the River Shannon	Athlone, Nenagh, and Tullamore
Lough Leane, County Kerry	Killarney
Lough Oughter, County Cavan	Cavan
Lough Ree on the River Shannon	Longford