



PROPOSED RULE **PK20**
(59FR9146)

Northeast Ohio Regional Sewer District

3826 Euclid Avenue • Cleveland, Ohio 44115-2504

216 • 881 • 6600

FAX: 216 • 881 • 9709

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OFFICE OF THE
DOCKETING

May 19, 1994

Mr. Samuel J. Chilk
Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

ATTN: Docketing & Service Branch

Re: RIN 3150-AE 90

Dear Secretary Chilk:

The following comments are in response to the advance notice of proposed rulemaking (#RIN 3150-AE90) that was published in the Federal Register on February 25, 1994. Pursuant to that notice, the NRC is soliciting comments on the need for a rulemaking regarding disposal of radionuclides into sanitary sewer systems.

Based on the experience of the Northeast Ohio Regional Sewer District ("District") and on the experiences of other publicly owned treatment works (POTWs) located throughout the country, it is obvious that current NRC regulations are not adequate to protect the workers and property at POTWs. There is clearly a need for a rulemaking regarding sanitary disposal. We are concerned, however, that the published notice indicates a lack of understanding as to the proper approach to the regulation of sanitary disposal.

Contrary to the position taken by the NRC, the cases of contamination at POTWs documented in the notice, and other cases not mentioned, have not been the result of recently developed technologies in sewage treatment. While certainly the NRC should consider the probability that treatment technology will improve and increase the removal efficiencies of radionuclides, there is substantial evidence that the NRC's current regulatory program is not adequately protecting POTWs utilizing very basic wastewater treatment techniques.

As a second preliminary point, the District believes that the NRC's emphasis on the concept of "reconcentration" as the cause of the problem is misleading. In the case of the contamination of the District's Southerly Wastewater Treatment Plant with CO-60, for example, there

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appears to have been little if any reconcentration in the sense of removal of soluble CO-60 from solution or even in the sense of aggregating very fine suspended particles into larger particles. It appears that particles of CO-60 were simply removed from the wastestream in the same manner as other solids are removed, primarily through settling. The only "reconcentration" that occurred was in the sense that the volume of material surrounding the Cobalt particles was reduced. The situation encountered by the District at the Southerly Plant is one of "hot spots" located within large volumes of slightly contaminated incinerator ash. The "hot spots" are caused by metallic particles of CO-60 that were unaffected by the plant's treatment processes.

As noted in the supplementary information section of the advanced notice, the NRC has previously amended 10 CFR Part 20 to no longer allow the discharge of dispersable (but non-soluble) materials, unless such materials are biological. If this new regulation is adequately enforced, it may prevent many problems with insoluble materials such as CO-60. The District believes, however, that the current language of 10 CFR Part 20 is inadequate to protect POTWs from all radioactive contamination problems and offers the following comments:

1. Impact on Licensees

The advanced notice suggests considerable concern that any further tightening of the restrictions on sanitary disposal would have a negative financial impact on NRC licensees. This concern is presumably in part the result of current high cost and limited availability of low-level waste disposal. The only disposal site for most generators, at Barnwell, South Carolina, is scheduled to close during the summer of 1994. Each state (or compact of states) must then assume responsibility for waste generated within it, and provide for disposal. Most states are many years from opening a low-level waste disposal site. We are concerned that radioactive waste generators, such as the 50-plus facilities in Ohio, will be forced to either store such waste, or seek an alternative disposal method such as the sanitary sewers.

Sanitary disposal will, therefore, appear increasingly more attractive to many licensees. Without proper regulation and enforcement, however, the effect of sanitary disposal can ultimately be the creation of huge quantities of low-level waste. For example, the District now has well over 4,000,000 cubic feet of CO-60 contaminated ash at the Southerly facility.

Further compounding the problems with radioactive contamination at POTWs is the NRC's position that the party in possession of radioactive material is fully responsible for remediating the situation and must bear the full cost of such remediation. NRC Chairman Ivan Selin has publicly stated this position would remain unchanged in the case of the District

create neither a violation of the plant's effluent limit interference with the plant's biosolids disposal. Developing limits is a complex process that requires a knowledge of given pollutant being discharged to the system and a knowledge of the plant's capacity to handle that pollutant. Only with this knowledge can a limit be assigned to each discharger that is protective of the plant.

The same general method must be applied to radionuclide sanitary disposal is to be safely permitted. Each radionuclide must be evaluated separately taking into account such factors as specific activity, half-life, and solubility. The NRC has only relied on its contractor Pacific Northwest Laboratories, to study the fate of radionuclides in POTWs. In addition to lack of knowledge on radionuclide behavior in a POTW, NRC Region III cannot evaluate which of its Cleveland area licensees practice sanitary disposal and therefore cannot possibly have any idea as to the quantities of radionuclides discharged.

Given the NRC's lack of knowledge of the elements required to establish effective limits that would be protective of sewage treatment plants, a reasonable revision to the limits on sanitary disposal may not be possible at this time. The District therefore requests that a moratorium on sanitary disposal be imposed until such time as the NRC can establish limits that are protective of POTWs.

3. Exemption of Patient Excreta

Medical sources have been implicated in POTW contamination as evidenced by the Region III conclusion that a hospital was responsible for the radioactive iodine at an Ohio POTW. The level of radioactivity in this facility's incinerator ash was sufficient to cause the ash to be rejected by a landfill after truck monitors at the landfill detected radioactivity. The District understands that, in certain medical applications, a complete elimination of radioactive discharges would be much more difficult to achieve than in an industrial situation. Nevertheless, all of the above comments are equally applicable to radionuclides, regardless of the source.

4. NRC Enforcement

Revision of the NRC's sanitary disposal regulations will provide protection against future contamination of POTWs only if coupled with reforms in the NRC enforcement program. 10 CFR Part 20 currently requires that any licensee that utilizes sanitary disposal must maintain a record of such disposals. This record must be available upon request for review by the NRC. There is no requirement for the licensee to submit any type of discharge report to the NRC.

even if the NRC had absolute proof that the material was illegally discharged by a known licensee. The chairman stated the POTWs only recourse in that situation would be a legal action against the discharger to recover the remediation cost. Notwithstanding this lack of assistance provided by the NRC to a contaminated POTW, the NRC has also consistently held the position that the Atomic Energy Act pre-empts any attempt by a POTW to enforce local discharge regulations regarding radiation that are more restrictive than 10 CFR Part 20.

In view of the fact that the consequences of sanitary disposal fall solely on the POTW, the District does not believe that the impact on NRC licensees can or should be a major consideration in revising the sanitary disposal regulations. The effect of current NRC regulations and policies is to create a situation that can easily lead to a small volume of low-level waste contaminating a large volume of material, or an entire POTW. The NRC then requires the public, not the discharger, to pay for the clean-up. This policy must change.

2. Total Quantity/Types of Limits

First, the District is amazed that the NRC would even seek public comment on whether dose limits to protect POTW workers should be a factor in calculating discharge limits. The District is extremely concerned with the health and safety of employees and therefore insists that worker protection receive the highest priority. The District is very concerned that the NRC would select any level of radiation exposure above background to which POTW workers (either at the plant or in the collection system) will be exposed without their consent. The very concept of the NRC developing such a dose criteria for POTW workers flies in the face of the NRC's policy of ALARA (As Low As Reasonable Achievable). The only apparent reason for exposing POTW workers to any additional radiation dose is to provide a cheap disposal method to NRC licensees. The District does not find such an approach to be reasonable unless the applicable dose limit is zero.

Limits that are protective of workers are not, however, adequate to protect property at a POTW. The incidents that have occurred at POTWs to date have not resulted in any significant exposures to workers. What has occurred is that POTWs have been prevented from using or disposing of the biosolids (sewage sludge) that are produced in the wastewater treatment process. Any method of calculating licensee discharge limits that does not adequately consider the potential for interfering with biosolids disposal at the receiving POTW is wholly inadequate and can result in billion dollar clean-ups paid with public funds.

Discharge of pollutants other than radionuclides are regulated by the local POTW. These local limits for dischargers to the sanitary sewer are based upon the POTWs' influent loading of each pollutant that will

create neither a violation of the plant's effluent limit nor an interference with the plant's biosolids disposal. Developing such local limits is a complex process that requires a knowledge of the volume of a given pollutant being discharged to the system and a knowledge of the plant's capacity to handle that pollutant. Only with this information can a limit be assigned to each discharger that is protective of the plant.

The same general method must be applied to radionuclides if any sanitary disposal is to be safely permitted. Each radionuclide should be evaluated separately taking into account such factors as specific activity, half-life, and solubility. The NRC has only recently begun, though its contractor Pacific Northwest Laboratories, to study the basics of the fate of radionuclides in POTWs. In addition to lacking knowledge on radionuclide behavior in a POTW, NRC Region III cannot even identify which of its Cleveland area licensees practice sanitary disposal, and therefore cannot possibly have any idea as to the quantities actually discharged.

Given the NRC's lack of knowledge of the elements required to establish effective limits that would be protective of sewage sludge, a reasonable revision to the limits on sanitary disposal may not be possible at this time. The District therefore requests that a moratorium on sanitary disposal be imposed until such time as the NRC can develop limits that are protective of POTWs.

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As a result of this policy, NRC Region III is unable to compile a list of dischargers in the Cleveland area. \ POTW, such as the District, is therefore unable to obtain a list of dischargers from the NRC in the event the POTW wishes to implement its own surveillance program.

In a petition for rulemaking (August 2, 1993; 58 FR 54071), the District has requested that licensees be required to provide the receiving POTW with 24 hours advance notice prior to each sanitary disposal of radioactive material. At a minimum, the NRC should also require that licensees submit such notice to the NRC and submit monthly discharge reports to the appropriate NRC regional office as well as to the receiving POTW. These reports should contain a complete record of all discharges for the month, sample results of concentrations, and total quantities discharged for the month and year.

In addition to requiring self-monitoring and reporting, it is imperative that the NRC establish a system of verification sampling of sanitary disposals. It is the District's understanding that the NRC has never conducted such a program and licensees are therefore aware that there is a near zero chance that sample results recorded in their sanitary disposal log book will be challenged by the NRC. Any program that relies on self-monitoring without verification invites carelessness if not fraud.

Pursuant to the Clean Water Act, the District is the local pretreatment authority through delegated authority under the NPDES Program for all pollutants other than radionuclides. District inspectors routinely place automatic 24 hour composite samplers in the sewer downstream of dischargers to verify compliance with all discharge permit limits. Nothing short of an NRC sampling program of this type will provide reasonable assurance that NRC licensees are complying with the sanitary disposal regulations.

In conclusion, the District considers the regulation of sanitary disposal of radioactive material to be a very important issue. In addition to the case studies presented in the advance notice, the District has reason to believe that contamination has been identified at additional POTWs and probably will be found at others as more POTWs are surveyed for radiation.

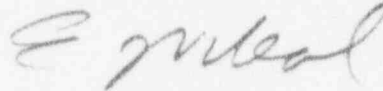
There is no evidence that this contamination has presented a significant health or safety problem. The District, however, has experienced a three year nightmare during which a never ending string of regulatory issues and concerns of the public and District employees have been addressed. This nightmare has cost over \$1.5 million to date, and can be attributed only to inadequate regulations or ineffective enforcement by the NRC. Due to recent discoveries of additional contamination at the District's Easterly plant, there is no end in

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sight. Based on the District's experience and the experience of many other POTWs, major revisions to 10 CFR Part 20 are long overdue, as are revisions to the NRC enforcement program.

Please contact Tom Lenhart at (216) 881-6600 if you wish to discuss these comments.

Sincerely,



Erwin J. Odeal
Executive Director

EJO/TEL/ydm

cc: Senator Howard Metzenbaum
Congressman Martin Hoke
Congressman Louis Stokes
Mayor Thomas Longo
Mayor Michael White
Mayor Louis Bacci
Mayor Kathleen Edwards
Javier Garza (General Accounting Office)
Karen Schneiderman (AFSCME)
Chris Trepal (Earth Day Coalition)
Ken Kirk (AMSA)
Dave Van Fleet (Ohio Water Environment Association)
Barry Koh
William Schatz
Thomas Lenhart