

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
DIVISION OF WATER RESOURCES

RE: City of Warwick and
Kimberly Calvitto, in her
capacity as City Treasurer
and Warwick Sewer Authority

DECISION AND ORDER

This matter is before this Hearing Officer pursuant to R.I.G.L. §46-12 entitled "Water Pollution", specifically 46-12-9 as amended, and R.I.G.L. §42-17.1-2(u) and the Regulations for the Rhode Island Pollutant Discharge Elimination System ("RIPDES Regulations") adopted pursuant thereto. The hearing was held in accordance with the Administrative Procedures Act (Chapter 42-35 of the Rhode Island General Laws) as amended, and the Administrative Rules Practice and Procedure of the Department of Environmental Management.

The Department of Environmental Management (DEM) by a Notice of Violation and Order dated February 12, 1986, alleges that the City of Warwick, Kimberly Calvitto, in her capacity as Treasurer of the City of Warwick and the Warwick Sewer Authority (collectively referred to as "Warwick Wastewater Treatment Facility" ("WWTF")) is in violation of R.I.G.L. §46-12-5(a), §46-12-5(b) and the RIPDES Regulations, Rules 14.02, 14.05 and 14.20. R.I.G.L. §46-12-5 provides:

46-12-5. Prohibitions. -- (a) It shall be unlawful for any person to place any pollutant in a location where it is likely to enter the waters or to place or cause to be placed any solid waste materials, junk, or debris of any kind whatsoever, organic or non-organic in any waters.

(b) It shall be unlawful for any person to discharge any pollutant into the waters except as in compliance with the provisions of this chapter and any rules and regulations promulgated hereunder and pursuant to the terms and conditions of a permit.

RIPDES Regulations Rule 14, specifically 14.02, 14.05, and 14.20 state in pertinent part:

14.02 Duty to comply

- (a) The permittee shall comply with all conditions of this permit. No pollutant shall be discharged more frequently than authorized or at a level in excess of that which is authorized by the permit. The discharge of any pollutant not specifically authorized in the RIPDES permit or listed and quantified in the RIPDES application shall constitute a violation of the permit. Any permit noncompliance constitutes a violation of the State Act or other authority of these regulations and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

. . .

- 14.05 Duty to mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

14.20 Bypass

- (a) . . .

- (b) . . .

- (c) Prohibition of bypass.

- (1) Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:

- (i) Bypass was unavoidable to prevent loss of life, personal injury or severe property damage; for purposes of this section "severe property damage" means:

(A) substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

- (ii) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the permittee could have installed adequate backup equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

- (iii) The permittee submitted notices as required under paragraph (b) of this section.

The Department bore the burden of proving that the WWTF violated the aforementioned law and regulations.

A prehearing conference was held on May 13, 1986. The parties agreed that exhibits marked DEM 1, 2, 3, 4, 5, 6, and Respondent's 1 would be entered in full. The parties were unable to agree to a stipulation of issues. The Hearing Officer will consider the issues as those stated in the Notice of Violation of February 12, 1986.

The City of Warwick owns and operates a publicly owned treatment works located at 300 Service Avenue, Warwick, Rhode Island. This wastewater treatment facility operates pursuant to a Rhode Island Pollutant Discharge Elimination System Permit ("Permit") numbered RI0100234 issued by the DEM. The Permit regulates the quality and amount of effluent which the WWTF may release into the Pawtuxet River. The WWTF treats municipal and industrial wastes. Treatment is accomplished through several processes including sedimentation tanks, sludge removal and digestion, aeration tanks and chlorination.

The DEM called two witnesses. Edward Szymanski, presently Supervising Sanitary Engineer for the DEM, Division of Water Resources was DEM's first witness. Mr. Szymanski was qualified as an expert in Wastewater Treatment System Design, Operation, and Maintenance. Mr. Szymanski holds a Bachelor of Science degree from the University of Rhode Island in Civil and Biological Engineering, is a Registered Professional Engineer and has eleven years of experience in the field of wastewater engineering. Leonard Maynard, Superintendent of the WWTF testified briefly as an adverse witness for the DEM. Mr. Maynard and Dennis Vinhatiero, Deputy Superintendent of the WWTF testified on behalf of the respondent.

Portions of the DEM testimony was allowed into evidence de bene, over the objections of respondent's Counsel to the

relevancy of the testimony to the issues before this Hearing Officer. After a thorough review of allegations contained in the Notice of Violation and review of the RIPDES Regulations, this hearing officer is satisfied that the evidence presented was relevant and material to the issues under consideration. This evidence provided much assistance to this hearing officer as the trier of fact.

The respondent presented evidence intended to establish that the discharge from the WWTF was not polluted. The respondent introduced a Department of Health fecal coliform analysis from a grab sample taken during a time when the chlorinator was not functioning. This sample disclosed a fecal coliform count well within permit limitations. This hearing officer has found this evidence unpersuasive. Fecal coliform represent only one category of potentially infectious bacteria present in municipal and industrial effluent. The results of a single grab sample are not decisive as to the potential for harm created by the discharge of unchlorinated effluent. This sample result does not indicate whether the final effluent is polluted.

Data contained in the monthly monitoring report submitted by the WWTF to the Department of Environmental Management indicate a fecal coliform count for 12/30/85⁵ of TNTC (too numerous to count). This sample clearly exceeded the 400/100 ml Permit limitation. The respondent attempted to discredit this sample result through testimony by Superintendent Maynard that sampling problems existed generally at the WWTF at the end of December 1985 and in early January 1986. Upon cross examination, however, Mr. Maynard stated he was not aware of any problems regarding the December 30, 1985 samples. The data contained in the monthly monitoring report is credible evidence that at least one pollutant (fecal coliform) was present in excess of the permit limitation on December 30, 1985.

FINDINGS OF FACT

After reviewing the documentary and testimonial evidence of record, I find as fact the following:

1. The WWTF is a publicly owned treatment works owned and operated by the City of Warwick at 300 Service Avenue, Warwick, Rhode Island.

2. The WWTF operates pursuant to a RIPDES permit issued by the Department of Environmental Management, permit #RI0100234.

The parties stipulated that the above-cited permit is still in force and that DEM has jurisdiction to enforce the permit.

3. On the evening of December 29, 1985 a break occurred in the water line supplying water to the WWTF but repair of the line was delayed until December 30, 1985.

4. Repair of the line necessitated shutting off of the water supply to the entire WWTF.

5. An alternative means of supplying water was attempted on December 30, 1985 through the running of a hose from an outside fire hydrant to the WWTF.

6. The water supply was shut off at 7:30 a.m.

7. The first monitoring test after the shut off was conducted at 10:00 a.m. as part of plant personnel's routine sampling.

8. The 10:00 a.m. routine monitoring revealed that the chlorinator was not functioning. No Chlorine was being added to the system.

9. The WWTF failed to chlorinate its discharge from approximately 9:00 a.m.

10. Compliance with permit limits requires the addition of chlorine at all times.

11. Chlorination provides the only means of disinfection and this process takes place in the chlorine contact tank just prior to discharge.

12. The liquid which enters the chlorine contact tank contains significant amounts of pollutants.

13. No chlorine was added to the system for a period of at least two hours and forty-five minutes. During this period sewage continued to flow through the facility at a rate ranging from 3.5 to 4 million gallons per day.

14. One million gallons of unchlorinated and partially chlorinated effluent was discharged by the WWFT on 12/30/85.

15. The discharge of unchlorinated sewage has a reasonable likelihood of adversely affecting the health of persons who consume shellfish harvested in areas inundated by the discharge.

16. The Permit establishes an effluent limitation for fecal coliform of 400/100 ml per day.

17. Fecal coliform is a pollutant and an indicator of other pollutants.

18. The monthly monitoring report (DEM 8) submitted by the WWTF to the DEM evidences a daily fecal coliform count of TNTC (too numerous to count) on 12/30/85. TNTC represents a measurement in excess of 400/100 ml per day.

19. Dennis Vinhatiero, Deputy Superintendent of the WWTF contacted the DEM at 11:30 a.m. to report the failure of chlorination.

20. No alternative means of supplying chlorine to the system was attempted until approximately 11:30 a.m. upon telephone instruction from Edward Szymanski, D.E.M. Supervising Sanitary Engineer. Mr. Szymanski directed the use of sodium hypochlorite.

21. Sodium hypochlorite is used to disinfect wastewater when conventional means are not available. Sodium hypochlorite was on hand and available for use at the WWTF at the time of the chlorinator failure.

Testimony indicated that hypochlorite can be added directly to the wastewater stream by a hose and spigot to

effect chlorination of the effluent prior to discharge. Once started, chlorine dripped into the system within fifteen (15) minutes.

22. A volumetric calculation is necessary to determine what feed rate of chlorine or sodium hypochlorite is required for adequate disinfection in relation to the amount of wastewater being discharged.

23. No volumetric calculation to determine the necessary feed rate for sodium hypochlorite was made by personnel of the WWTF until 12:30 p.m. on 12/30/85.

24. The WWTF has no standard operating procedures for the use of sodium hypochlorite.

25. Chlorine residual is a measure of the amount of chlorine which remains in the wastewater beyond the demand.

26. The Department of Environmental Management recommends a chlorine residual of 2.0 to ensure that adequate chlorination is taking place. There is no minimum or maximum limitation for chlorine residual in the Permit.

27. A chlorine residual of zero manifests a need for adjustment of the chlorine feed.

28. A bypass is the intentional diversion of wastes from any portion of a wastewater treatment facility.

CONCLUSIONS OF LAW

Based upon the foregoing facts and testimonial and documentary evidence of record, I conclude as a matter of law that:

1. The WWTF violated R.I.G.L. §46-12-5(a) by discharging unchlorinated municipal and industrial wastewater into the Pawtuxet River on December 30, 1985.

The number of gallons of unchlorinated sewage is not germane to liability but may bear, if at all, upon the

2. The WWTF violated R.I.G.L. §46-12-5(b) on December 30, 1985 by its discharge of unchlorinated municipal and industrial sewage into the Pawtuxet River, in violation of its RIPDES Permit.

3. The WWTF violated RIPDES Regulation 14.02 by its failure to comply with all conditions of the permit, specifically, its failure to add chlorine to the wastewater at all times on December 30, 1985 and the discharge of unchlorinated sewage.

4. The WWTF violated RIPDES Regulation 14.05 by its failure to take all reasonable steps to minimize or prevent a discharge in violation of the permit, such discharge having a reasonable likelihood of adversely affecting public health or the environment.

Water was supplied to the chlorinator through the use of an above ground fire hose. Water pressure affects chlorination. The first test for chlorine residual after the "fire hose setup" was 10:00 a.m. and resulted in a chlorine residual reading of zero. Expert testimony indicated that in light of the temporary nature of the water supply hookup, plant personnel should have taken chlorine residual measurements at more frequent intervals to ensure compliance with permit limitations. Although testimony was equivocal on the exact import of a zero chlorine residual, there was agreement, at the very least, that a zero measurement signals a need for adjustment of the chlorine feed, and at that level, one cannot be certain proper disinfection is taking place.

The personnel at the WWTF discovered that the chlorinator was not functioning at 10:00 a.m. There existed an immediate feasible alternative to effectuate chlorination through the use of sodium hypochlorite which was on hand and available for use at the WWTF. Testimony established that this alternate means of supplying chlorine

to the system was not attempted by plant personnel until instructed to do so by the Department of Environmental Management, a full one and one half hours after plant personnel discovered the chlorinator was not functioning. Moreover, no volumetric calculation was made to determine the feed rate necessary to accomplish adequate disinfection until 12:30 p.m., in response to a lingering chlorine residual of zero.

5. The WWTF violated RIPDES Regulation 14.20(c) through its bypass of the chlorination portion of the treatment facility.

The failure to chlorinate the wastewater after discovery of the chlorinator non-function constitutes a bypass prohibited pursuant to RIPDES Regulation 14.20(c). The WWTF introduced evidence regarding the possibility of damage to the roadway to establish that the bypass was necessary. This evidence did not rise to the level of "severe property damage" as defined in Rule 14.20 C(1)(i)(A). Moreover, the manual addition of sodium hypochlorite to the wastewater was a feasible alternative to the bypass which was readily available to the WWTF.

Therefore it is

ORDERED

1. Within thirty (30) days of receipt of this Order the WWTF shall submit a written report to the Department of Environmental Management, Division of Water Resources detailing the following:

- (a) Records of maintenance and inspection of the chlorinator at the WWTF during 1985.
- (b) all actions that could have been taken to prevent, minimize, or control the unchlorinated discharge on December 30, 1985.

(c) Additional actions or plans designed to prevent reoccurrence of discharge of unchlorinated effluent.

(d) The construction work on or about December 29, 1985 that led to the break in water supply to the Warwick Wastewater Treatment Facility and what supervisory responsibility, if any, WWTF exercised in regard to that work.

2. Within one hundred twenty days (120) of receipt of this Order the WWTF shall develop written standard operating procedures for the emergency use of sodium hypochlorite. A copy of these procedures shall be sent to the Department of Environmental Management, Division of Water Resources upon completion. All Staff personnel responsible for chlorination and all persons acting in a supervisory capacity at the WWTF shall be instructed in the use of sodium hypochlorite pursuant to these Standard Operating Procedures.

3. Within thirty days of receipt of this Order the WWTF shall pay an administrative penalty of five thousand (\$5,000) dollars for its violations of the Water Pollution statute and RIPDES Regulations.

This Hearing Officer concluded that the WWTF violated R.I.G.L. §46-12-5(a), §46-12-5(b), Rules 14.02, 14.05 and 14.20 of RIPDES Regulations. A maximum penalty of five thousand dollars may be imposed for each violation. In the Notice of Violation issued February 12, 1986, the Department of Environmental Management imposed a total penalty of five thousand dollars (\$5,000) and requested that this hearing officer affirm that amount.

The violations of 46-12-5(a) and 46-12-5(b) arise out of the same underlying facts. They are substantial violations of a statute designed to protect the public health and welfare, and environment from the unpermitted discharge of pollutants. In this instance, the discharge of unchlorinated municipal and industrial waste had the potential of adversely affecting

public health and the environment. It was also an endangerment to the livelihood of citizens of our State. The impact of the non-compliance affected a major area (upper Narragansett Bay).

Upon notice at 11:30 a.m. of the failure of the chlorinator, the flow rate, and the failure to add chlorine by alternate means, the Department of Environmental Management made an immediate decision to close upper Narragansett Bay to shellfishing. At that point in time, the DEM had knowledge that no chlorine had been added to the system since approximately 9:00 a.m., yet the WWTF was discharging at all times. Charged with the protection of public health, the Department of Environmental Management acted reasonably and with ample justification in closing the upper bay to shellfishing. The DEM, in the interest of public health, had to make a rapid assessment of the potential risk to human health and act upon that assessment.

Similarly, the WWTF's violations of RIPDES Regulations Rule 14.02, 14.05 and 14.20 are substantive. Each violation had the potential for serious harm to public health. These violations are not mere technicalities. Rather, they are of the essence of the regulations and should be strictly enforced. In light of these considerations, the five thousand dollar penalty is affirmed.

4. No evidence establishing costs was presented at the hearing and the Department's request for costs is therefor denied.

7/24/86
DATE

Kathleen M. Lanphear
KATHLEEN M. LANPHEAR
in her capacity as
Hearing Officer

7/24/86
DATE

Robert L. Bendick, Jr.
ROBERT L. BENDICK, Jr.
Director
Department of Environmental

CERTIFICATION

I hereby certify that on the 25th day of July, 1986, I mailed a copy of the within Decision and Order, postage prepaid, to Paul K. Sprague, Assistant City Solicitor, City Solicitor's Office, Warwick City Hall, 3275 Post Road, Warwick, Rhode Island 02886 and a copy to Robert A. Shawver, Legal Counsel, Department of Environmental Management, 9 Hayes Street, Providence, Rhode Island by interoffice mail.

Ray L. Thurgood