

TEXTRON Lycoming

Stratford Division
Textron Lycoming/
Subsidiary of Textron Inc.

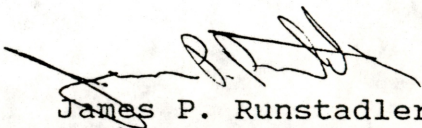
550 Main Street
Stratford, CT 06497
203/385-2000

March 6, 1992

Mr. Richard Mason
CT Dept. of Environmental Protection
Water Compliance
122 Washington Street
Hartford, CT 06106

Dear Mr. Mason:

Enclosed is a summary of an accidental discharge of from Textron's chemical wastewater treatment facility on Saturday, February 22, 1992. Mr. Dan Holland of the Connecticut Department of Environmental Protection reviewed the situation on February 25, 1992 when he was visiting the facility on a routine water inspection and requested this write up be brought to your attention.



James P. Runstadler
Environmental Engineer
(203) 385-3741

CC:D.Holland
R.Kelley

MILFORD MATERIALS TESTING LABORATORY, INC.

655 Plains Rd. • Milford, Connecticut 06460

(203) 877-3163

March 5, 1992
Test M53075

Mail to P.O. Box 493
Milford, Conn. 06460

To: Textron-Lycoming Div.
650 South Main St.
Stratford, Ct. 06497

Att: Mr. James Runstadler Plant Eng.

From: Burt M. St. Clair

Re: Exam of waste water PO H350182 Rec'd 2/24/92

Instructions- Identify Suspended Solids

Test	Result
TSS	669 Mg/l
Chem Analysis Emission Spectro Exam of S.S.	

Test	Result
Polymer -Floccing Agent	42%
Lime	1%
Al + Mg Compounds	55.0%

Burt M. St. Clair

High pH Discharge at the Chemical Wastewater Treatment Plant

The following is a description of the events caused by an equipment malfunction and associated accidental release of water with a high pH and containing a high concentration of lime, polymer, and aluminum and magnesium compounds. The discharge was visible for approximately 100 feet from the outflow pipe.

On Thursday morning, February 20, 1992, the chemical waste treatment group leader noticed that an acid probe in the chrome reduction tank had malfunctioned during the previous night. The acid probe had erroneously read a high pH and automatically added an excess of acid to the system. When the neutralization process could not keep up with the additional acid in the system the influent pumps to the treatment tank were automatically shut down and the discharge was stopped. During Thursday the wastewater was recirculated back into the equalization tank and lime was added to the system in an attempt to raise the pH to the appropriate level.

On Friday, February 21, 1992, the pH in the clarifier was still too low and both caustic and lime were added to bring the pH back in line. There was a large amount of floc in the tank due to the processing of some aluminum sulfate from a preventive maintenance operation at the oil abatement plant. By late Friday night the pH in the clarifier was thought to have stabilized and the clarifier was again running clear.

The morning of Saturday, February 22, 1992, the waste treatment group leader noticed a white discharge outside the discharge pipe in addition to a pH in the clarifier that was significantly above the operating range. The pH of the clarifier was stabilized using sulfuric acid and hydrochloric acid. Later in the day the motor on the sludge rake was found to not be working. It is believed that at some point during Saturday morning the sludge bed in the clarifier inverted and the lime, polymer, and aluminum compounds that had settled on top of the sludge was discharged through the sand filter and out to the tidal basin. By midmorning on Saturday the waste treatment plant was back to normal operation.

A subsequent analysis of the material deposited in the tidal basin showed a high concentration of lime, wastewater treatment polymer, and aluminum and magnesium compounds. A copy of the analysis is attached.

An analysis of the recording charts showed that the pH of the discharge exceeded 9.5 for eight (8) hours from 12 PM Friday to 8 AM Saturday. A maximum pH of 11.5 was reached during this period. Throughout these eight hours the treatment plant was running at a rate of 165 GPM for a total discharge of 79,200 gallons.

A review has been undertaken to ensure that this problem or similar problems do not occur in the future. Some of the solutions under consideration are a back up of the acid probe in the treatment tanks, an automatic shut off on automatic acid additions in case of neutralization problems, a monitor on the sludge rake to detect a failure, or the installation of a Lamella clarifier to facilitate wastewater treatment.