

ILLINOIS POLLUTION CONTROL BOARD
October 22, 1981

ILLINOIS ENVIRONMENTAL PROTECTION)
AGENCY,)
)
Complainant,)
)
v.) PCB 79-207
)
VILLAGE OF ROMEOVILLE, a)
municipal corporation,)
)
Respondent.)

MR. WILLIAM E. BLAKNEY, ASSISTANT ATTORNEY GENERAL, APPEARED
ON BEHALF OF THE COMPLAINANT.

MR. THEODORE J. JARZ, McKEOWN, FITZGERALD, ZOLLNER, BUCK
SANGMEISTER & HUTCHISON, APPEARED ON BEHALF OF THE
RESPONDENT.

OPINION AND ORDER OF THE BOARD (by D. Anderson):

This matter comes before the Board upon a complaint filed October 2, 1979 by the Illinois Environmental Protection Agency (Agency) naming as respondent the Village of Romeoville (Romeoville). The complaint alleges violations of Sections 12(a) and 12(f) of the Illinois Environmental Protection Act (Act) and Rules 501 and 901 of Chapter 3: Water Pollution in connection with operation of a municipal wastewater treatment plant in Will County. Romeoville filed an answer on October 24, 1979. Public hearings were held in Romeoville on April 20 and June 12, 1981. Members of the public attended.

Romeoville operates its municipal wastewater treatment plant No. 1 on Bull Run Drive, Romeoville. Pursuant to NPDES permit, the plant discharges via outfall 001 to an unnamed ditch tributary to the Des Plaines River. The allegations of the complaint involve reporting irregularities and violations of NPDES effluent limitations for 5-day biochemical oxygen demand and total suspended solids (BOD and TSS).

The plant serves about 9,500 people (R.94). It has a design average capacity of 2 MGD (million gallons per day) and a design maximum of 5 MGD (R.96, 107).

The treatment plant includes four package plants operated in parallel. Influent sewage is split into four streams (R.13).

The outputs from the package plants are combined and passed through a common sand filter. The output is chlorinated prior to discharge (R-13, 32, 44).

The package plants are described as follows: Input is to an aeration unit, then to the central clarifier (R-13, 42). Clarified water passes over a weir to the sand filter described above (R-45). Solids proceed to a reaeration unit and a digester (R-13, 42, 46). Liquids are returned to the aeration unit (R-41, 46). Solids go to the sludge drying beds (R-33, 46).

Two recycle operations are described in the transcript. The sand filter is periodically backwashed (R-23). Solids are washed from the contact chlorinator (R-13, 23, 35, 45). These are pumped back to the head of the plant.

There are 8 sludge drying beds (R-33). Solids are pumped to them from the digester (R-46). Bed area is inadequate for the plant, although it is designed in accordance with Agency criteria which call for 2 square feet per person served. Sludge does not have time to dry during a wet summer, such as 1981; there is a carry-over into the winter months when conditions are not favorable for drying (R-35, 77). The Agency is considering modifying its criteria to 3 square feet per capita (R-80).

The plant has several operational problems which tend to increase BOD and TSS levels. These include hydraulic overloading, inadequate sludge handling capacity and freezing of equipment during winter.

Normal input is 1.0 to 1.2 MGD, well under the 2.0 MGD design average (R-39, 61, 96, 107). During rainfall this increases to 1.7 to 3.0 MGD, in excess of design average, but less than the design maximum of 5.0 MGD.

The source of excess flows is thought to be infiltration and inflow. The former is from cracks and joints in the sewers (R-90, 98, 103, 108). The system also has inflow from sump pumps and downspouts (R-96, 126).

The excess flow tends to wash solids from the aeration chamber to the sand filter (R-32, 47, 64, 106, 108). This excess flow reduces the contact time of the sewage with microorganisms in the aeration chamber and reduces the settling time. The solids which wash out tend to require an increase in the frequency of backflushing the sand filter and of cleaning the chlorination unit. Because the backflush must be sent back through the plant, capacity is further strained (R-32, 46).

These backwashed wastes also tend to make the biological process anaerobic, decreasing treatment efficiency (R-37, 46).

This problem is compounded by the inadequate sludge handling capacity of the plant. Sludge is not removed from the biological units often enough because there is no place to put it (R-62, 77, 106).

In the past the plant has had malfunctions because of equipment freezing. These have been corrected. In addition there is a problem from frozen sludge drying beds in the winter (R-23, 34, 62, 66). The composite sampler pipe also tends to collect condensate which freezes in the winter (R-66).

The following is a summary of the allegations of the complaint:

<u>Count</u>	<u>Section/Rule</u>	<u>Summary</u>
I	§12(a) and (f) Rule 901	Violation of NPDES permit limitations for 5-day biochemical oxygen demand (BOD)
II	§12(a) and (f) Rule 901	Violation of NPDES permit limitations for total suspended solids (TSS)
III	§12(f) Rules 501 and 901	Failure to monitor and report ammonia nitrogen as required by NPDES permit

On October 27, 1977 the Agency issued to Romeoville NPDES Permit No. IL0030805. Effluent limitations for BOD and TSS appear to be based on Rule 404(c), although violation of this rule is not alleged. Effluent limitations include the following:

	<u>30 day Average</u>	<u>7 day Average</u>
BOD	10 mg/l	15 mg/l
TSS	12 mg/l	18 mg/l
Ammonia (as N)	(Reference to Rule 203)	

The standards for BOD and TSS will be referred to as "10/12". The permit also required 5 composite samples per week for BOD, TSS and ammonia.

The NPDES permit expired September 30, 1979. The Agency has indicated that the permit is non-issuable "due to the fact that the facility has not demonstrated it can consistently meet the terms and conditions of its previous permit." (R-111) The Agency appears to be paraphrasing old Rules 902(i)(1)(i) and 902(i)(1)(iii). These have been repealed (R79-13, May 15, 1980, 38 PCB 341; July 24, 1980; 3 Ill. Reg. No. 34, p. 159, August 22, 1980). The intention was to allow renewal permits to be issued to facilities even if they were out of compliance, reasoning that it would be preferable to issue new permits reflecting changes in the facility and regulations than to attempt to enforce dated, expired permits (38 PCB 342). The Agency supported this change in its comments filed February 25, 1980.

The Agency regards the expired permit as continuing in effect because a timely application was made for renewal (R-111). Romeoville has expressed no opposition to this interpretation.

The Agency introduced 20 discharge monitoring reports (DMR's) (Ex. 2). There is a complete set from June, 1978 through June, 1979. Seven reports are in evidence from the 19 month period from July, 1979 through January, 1981. BOD levels were omitted from one report.

In the following summary are given the average of monthly averages and the highest reported maximum for three periods:

	<u>BOD (mg/l)</u>		<u>TSS (mg/l)</u>	
	<u>Ave.</u>	<u>Max.</u>	<u>Ave.</u>	<u>Max.</u>
June '78-Dec. '78	7.2	20.7	17.7	129.0
Jan. '79-June '79	20.6	52.9	18.8	259.9
July '79-Jan. '81	12.7	25.1	18.0	71.4

Romeoville altered its testing methods in July, 1979. It adjusted the method of determining BOD and increased the sample size. The difficulty with the BOD analysis was believed to have resulted in apparent elevated BOD levels. The increased sample size has reduced the data scatter (R-49, 55).

The data during the last period in the table probably represent a selected sample skewed toward non-compliance. If one assumes that the missing dozen reports showed no violations, the actual averages would be less than the values given, while the maxima would be unchanged. This would indicate

greatly improved performance over the preceding periods. However, violations of the 30 day average 10/12 permit conditions continued to some extent.

The Board finds that Romeoville violated the 30 day average, 10 mg/l BOD NPDES permit effluent limitation during the following months: December, 1978; January, 1979 through June, 1979; and March through May, and July, 1980. The Board finds Romeoville violated the 12 mg/l TSS standard during the following months: June, July, September, October and November, 1978; January and February, 1979; and February through May, 1980. The Board therefore finds that Romeoville violated §§12(a) and 12(f) of the Act and Rule 901 of Chapter 3, substantially as alleged in the complaint.

Count III alleges failure to sample and report levels of ammonia. Romeoville admits this violation. After the permit was reissued in 1977 it continued to use photocopies of report forms which listed parameters to be tested under the old permit. The operator did not notice that ammonia sampling had been added to the permit. Romeoville failed to report ammonia from 1977 to January, 1979. After notification by the Agency it began reporting ammonia levels (R-15, 25, 58, 70; Ex. 2). The Board finds that Romeoville failed to monitor and report ammonia levels as required by NPDES permit during the noted period and that it thereby violated §12(f) of the Act and Rules 501 and 901 of Chapter 3.

Correction of Romeoville's problems involves reduction of hydraulic load and an increase in solids handling capacity. Reduction in hydraulic load involves completion of an infiltration and inflow study, followed by corrective measures such as repair of leaks and disconnection of downspouts and sump pumps (R-96, 126, 146). A facilities plan study was initiated in 1976 (R-90). It was expected to be submitted to the Agency around May 15, 1981 (R-99). There is no indication in the transcript as to whether this was done. The Board will require Romeoville to initiate a program to disconnect sources of inflow.

An alternative is construction of a holding basin to receive excess storm flows. A permit application was made several years ago. The Agency neither granted nor denied the application, but "tabled" it (R-102).

Increases in sludge handling capacity could be effected by increasing the number of drying beds, by covering the beds, or by installation of a mechanical sludge drying unit (R-77, 106). In its brief Romeoville indicates it has begun hauling wet sludge from the plant for disposal. There may be inadequate

room for expansion of the beds (R. 81). Romeoville's engineer has recommended installation of a belt press (R. 82). This would cost about \$310,000, but could go higher if a larger building were constructed (R. 84).

Respondent was before the Board in recent enforcement action brought by a citizen concerning sewer overflows (Canfarelli v. Romeoville, PCB 79-75, 35 PCB 459, October 4, 1979). The Board's Order apparently resulted in replacement of a sewer line. This has restricted the amount of bond funding available for further work (R. 136, 139).

The belt press would cost about \$32.63 per person in the service area. There appear to be adequate measures whereby bonds could be issued to cover this (R. 134, 136, 141). Romeoville has indicated its reluctance to proceed with major improvements without guidance from the Agency (R. 128). In its brief it asks that the Board enter an order directing the steps to be taken in making necessary improvements (p. 6, 8).

The Board will decline to grant Romeoville's request. In the first place there are inadequate facts and parties before the Board to make the regional wastewater planning decision requested (R. 127). In the second place responsibility of initially making a plan falls on Romeoville. Any necessary permit applications are to be filed with the Agency, whose action is subject to review by the Board.

Section 39(a) of the Act imposes a duty on the Agency to act on permit applications. It is incumbent on applicants to insist on either the permit or reasons for denial. Denial may be appealed to the Board.

There is no evidence in the record of any great injury or interference with the health, general welfare or physical property of the people, apart from the excess of BOD and TSS discharged. The treatment plant is of great social and economic value, but this value is reduced by careless operation. The plant seems to be suitable to the area in which it is located. It is technically practical and economically reasonable to eliminate the discharges in excess of the standards.

Having reviewed the extent of the violations and the mitigating factors, the Board finds that a monetary penalty of \$500 is necessary to aid enforcement of the Act in view of the careless disregard of the reporting requirements and the failure to pursue permit issuance for corrective measures to improve sludge handling. This Opinion constitutes the Board's findings of fact and conclusions of law in this matter.

ORDER

1. The Board finds that Respondent, the Village of Romeoville, has violated Sections 12(a) and 12(f) of the Act and Rules 501 and 901 of Chapter 3: Water Pollution.

2. Within 60 days of the date of this Order, the Village of Romeoville shall file with the Illinois Environmental Protection Agency such permit applications as may be necessary to upgrade the sludge handling capacity of its Plant No. 1.

3. Within 90 days of the date of this Order, Respondent shall adopt ordinances prohibiting connection of sump pumps and downspouts to its sewage system.

4. Within 180 days of the date of this Order, the Village of Romeoville shall adopt and implement an inspection program likely to find sump pump and downspout connections.

5. Respondent shall report to the Agency within 180 days outlining its inspection plan, and, within one year, the number of downspouts, sump pumps and other illegal connections which have been disconnected.

6. Respondent shall cease and desist violating Section 12 of the Act and Rules 501 and 901 of Chapter 3: Water Pollution.


7. Within 35 days of the date of this Order, Respondent, the Village of Romeoville, shall, by certified check or money order payable to the State of Illinois, pay a civil penalty of \$500 which is to be sent to:

State of Illinois
Fiscal Services Division
Illinois Environmental Protection Agency
2200 Churchill Road
Springfield, Illinois 62706

8. Respondent's Motion for Leave to File Brief late is granted.

IT IS SO ORDERED.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order were adopted on the 20th day of October, 1981 by a vote of 5-0.



Christan L. Moffett, Clerk
Illinois Pollution Control Board