

ILLINOIS POLLUTION CONTROL BOARD  
July 6, 1978

LEONARD C. TRIEM, d/b/a TRIEM )  
INDUSTRIAL BUILDING OPERATIONS, )  
 )  
Petitioner, )  
 )  
v. ) PCB 77-261  
 )  
ILLINOIS ENVIRONMENTAL )  
PROTECTION AGENCY, )  
 )  
Respondent. )

KLEIN, THORPE, AND JENKINS, LTD. (MR. E. KENNETH FRIKER, OF  
COUNSEL) APPEARED ON BEHALF OF THE PETITIONER.

MS. JUDITH S. GOODIE, ASSISTANT ATTORNEY GENERAL, APPEARED ON  
BEHALF OF THE RESPONDENT.

OPINION AND ORDER OF THE BOARD (by Mr. Werner):

This matter comes before the Board on a Variance Petition filed on October 4, 1977 by Leonard C. Triem, doing business as Triem Industrial Building Operations (hereinafter "Triem"), requesting relief from the final cover requirement of Rule 305(c) of Chapter 7: Solid Waste Rules and Regulations. On January 19, 1978, the Illinois Environmental Protection Agency filed a Recommendation in favor of granting the variance provided that the Petitioner adhere to certain conditions. On March 17, 1978, the Agency filed an Amendment to the Recommendation which suggested additional conditions. A hearing was held on April 28, 1978.

Triem has operated a sanitary landfill site at 26th and State Streets in Chicago Heights, Illinois since 1947. Prior to Triem's purchase of this southern Cook County site, the land had been used for refuse dumping by approximately 20 surrounding communities since 1929. Petitioner describes the site (as of 1947) as a clay hole 20 to 30 feet deep surrounded by a solid clay wall with a clay berm 15 feet high subsequently added by Triem. Before Triem's ownership of the property, "it was just a common dump where they ...dumped refuse of all types, including industrial wastes and burned it." (R. 31) The Petitioner, in describing his pioneering efforts at environmentally sound practices, states that "as soon as I took over in early 1947, I cleaned up that and employed the sanitary landfill method of operation." (R. 31).

On August 5, 1976, the Board granted Petitioner a one-year variance from the final cover requirements of the Board's Solid Waste Rule 305(c) in PCB 76-32, in order to allow Petitioner time to complete the depositing of refuse on approximately 5% of the 45.7 acre landfill site and to take steps toward final, complete and proper closure of the site.

Triem originally estimated that about 20 months would be needed to complete final cover by applying approximately 89,540 cubic yards of clay cover material to the property. However, the 1976-1977 fall and winter were two of the coldest periods in the history of the Chicago metropolitan area. Such severe cold caused very deep penetration of frost which made the removal, hauling and spreading of clay cover material extremely difficult. In addition to the severely cold winter, the spring and summer months were characterized by heavy and frequent rainfall which greatly restricted the application of cover material. On May 28, 1977, Triem ceased all depositing of refuse on the property. For the period from the grant of the original variance until September 8, 1977, the Petitioner hauled 79,720 cubic yards of clay material to meet cover requirements. It is now estimated that an additional 40,000 cubic yards of cover material will be required to complete final cover to a depth of 2 feet and Triem is accordingly requesting additional time for this project.

The Agency has recommended that Triem be granted a variance which should extend one year from the date of expiration of the Petitioner's previous variance in PCB 76-32 (i.e., until August 5, 1978). The original Agency Recommendation suggested that, as conditions of the variance, the Board should order Triem to: (1) submit an acceptable plan for correcting a potential water pollution problem at the site; (2) test for migration of gas outside the landfill; (3) correct any gas migration discovered; and (4) monitor the site for 3 years. On March 17, 1978, the Agency filed an Amendment to its Recommendation which suggested that Triem be required to meet additional conditions. The Agency recommended that Triem should be required to: (1) apply for a permit to build a barrier to seal an adjacent pond from the landfill; (2) apply for a second permit addressing the disposal of wastewaters from Triem's adjacent steel processing plant which are deposited in a lagoon adjoining the landfill; (3) place final cover on all areas of the site which have been used for refuse disposal.

At the hearing on this matter, three fundamental issues were raised which pertain to: (1) the time required to complete the final cover of the landfill; (2) the proper handling of methane gas which may be discharged from the landfill; and (3) the necessity for treatment of wastewaters generated from the Petitioner's adjoining steel plant.

In reference to the first issue, the record reveals that the site in question was operated as an open dump for many years before its acquisition by the Petitioner. During the period from early 1975 until September 8, 1977, the Petitioner placed a total of 262,493 cubic yards of clay cover material on the site, indicating a good faith attempt to achieve compliance. (R. 33-34). Accordingly, it is appropriate to grant the Petitioner until December 31, 1978 to place final cover on all areas of the site which have been used for refuse disposal.

The second issue relates to the possibility that methane gas is migrating from the landfill site to surrounding properties. Mr. Triem testified that nine methane gas burners had been installed over the last three years "because we found we had some methane gas odors we had checked out by a chemical engineer, and he advised that we do this." (R. 38-39).

Nevertheless, there is some question as to the precise origin of the methane gas. Mr. Triem testified that, in response to complaints by people on neighboring properties, a gas leak was found in the Northern Illinois Gas line on 26th Street and that the gas company repaired that leak. (R. 39). Testimony also indicated that there are other potential sources of methane gas in the vicinity of the Triem landfill - including two municipal sanitary landfills and a sewage treatment plant. (R. 93, R. 116).

The evidence deposition of an Agency employee, Mr. Kenneth Bechely, describes how the Agency first became aware of the possibility of a gas migration problem and discusses some of the procedures used to take samples from 3 separate locations near Triem's sanitary landfill. (Respondent's Exhibit 1). The Agency made an offer of proof as to the testimony of Agency employees Mr. Scot A. Miller and Mr. Joseph Petrilli and as to Respondent's Exhibit 14 (i.e., the 3 gas sample analysis reports) after the Hearing Officer sustained an objection to their admissibility. Had it been allowed, the testimony of Mr. Miller would have shown that the gas in the three samples collected by Mr. Bechely contained methane and carbon dioxide, and did not contain propane or ethane. (R. 88-89). The three gas sample reports would have tended to support Mr. Miller's statements. (Respondent's Exhibit 14). Mr. Petrilli's testimony would have shown that the migration of gas from a landfill creates a danger of explosion. (R. 101). His testimony also indicated that the way to determine whether gas migration is occurring is to conduct appropriate tests.

The Agency has asserted that the Hearing Officer erred in sustaining the Petitioner's objections to the testimony of Mr.

Miller and Mr. Petrilli concerning the results of tests on three gas samples and the dangers of gas migration, and to the admission of Respondent's Exhibit 14 for Identification (i.e., the 3 gas sample reports). The Hearing Officer believed that there was "no proper chain of evidence on these samples" and that a gap in the chain of evidence renders a laboratory sample inadmissible in a civil case. (R. 104).

On this issue, the Agency's offer of proof shows that the 3 gas cannisters (and the attached sample analysis forms which identified each sample) were placed on Mr. Miller's desk at the Agency's Springfield office on a Saturday by Mr. Petrilli. (R. 98-100). Mr. Miller testified that he found the cannisters and forms on his desk the following day and delivered them to the Agency laboratory. (R. 83-85). The cannisters were apparently stored according to customary lab procedures until testing and deterioration in such samples is not likely to occur. (R. 95-96).

The Agency contends that the sample reports and the testimony related to them should have been admitted into evidence and that any gap in the chain of evidence should go to the weight of the evidence rather than to its admissibility. Woolley v. Hafner's Wagon Wheel, Inc., 22 Ill. 2d 413, 176 N.E. 2d 757 (1961). While it is true that the Agency's handling of the samples left something to be desired in light of the strict legal rule on "chain of evidence," the attempted introduction of testimony and reports was for the limited purpose of showing the reasons for the Agency's belief that corrective measures should be taken to locate and divert any methane gas which may be migrating from the site.

Given the limited basis on which the evidence was offered, the Board can appropriately evaluate the testimony and reports for whatever probative value they have. For example, the Board notes that the gas sample reports have failed to specify whether the percentages of gas discussed are by weight or volume. (Resp. Exh. 14). These reports have also failed to include a necessary ultimate analysis indicating each of the components of the gases. (Resp. Exh. 14). Nevertheless, the Board takes official notice of the fact that the ultimate analyses of gas from utility pipelines usually indicate relatively small percentages of carbon dioxide (which would tend to indicate the methane gas in question was from a source other than the utility line), and that methane is a flammable gaseous hydrocarbon (CH<sub>4</sub>) that is a product of decomposition of organic matter. The Board also notes that a methane gas problem has previously been experienced at the landfill site. (R. 38-39). Accordingly, to guard against any possible explosions due to methane gas migration, the Board believes that it is reasonable and prudent to require that

Triem Industrial Building Operations conduct all necessary tests and take immediate and appropriate steps to correct any gas migration problem.

The third major issue in this case involves the existence of a potential water pollution problem. The Petitioner believes that, since the landfill was a clay hole when disposal operations commenced, no leachate is escaping from the site. To support this view, it was emphasized that contractors installing a 48-inch diameter sewer line to a depth of 15 to 32 feet, a distance of 1292.24 feet immediately west and down-gradient of the site reported that only "solid, hard, clear clay material" was encountered in the digging operation.

On the other hand, the Agency is concerned that leachate could be a potential problem. Directly south of the landfill in question, the Petitioner operates the Triem Steel Company which has two discharge points outside the plant. These two discharges are joined in a ditch which has been cut through old, previously filled areas of the landfill and flows west to the southwest corner of the landfill. There, if the discharged material has not already been absorbed into the ditch, it is deposited in a large pit. Both the ditch and the pit show some discharged refuse on their sides. The discharged material is spent sulfuric pickling liquor which initially goes into an underground mixing tank where it is mixed with a neutralizer and is further diluted by large amounts of run-off water that goes down into the same sewer. (R. 35-36). No Agency permit has been issued for these discharges which are high in suspended solids, iron and zinc.

Wastewater from the steel operation flows through a sewer from the steel processing plant into a holding lagoon or pond at the southwest corner of the landfill site. (R. 23, R. 36, R. 52). This pond also receives storm water from the site and surrounding areas. Mr. George Ranney, a professional engineer, testified that he was retained by Triem Industrial Building Operations and that the design and construction of a barrier to prevent seepage from the lagoon into the landfill site was discussed. (R. 13).

The Agency suggests that Triem, as a condition of its variance, be required to apply for a permit to build a barrier to seal the pond adjacent to the landfill and to apply for a second permit to implement an acceptable plan for disposal of its industrial wastewater. In light of the nature of the discharges, this appears to be a reasonable requirement.

Accordingly, after taking into consideration all the facts and circumstances of this case, the Board finds that Petitioner would suffer an arbitrary and unreasonable hardship if required to immediately meet the final cover requirements of Rule 305(c) of Chapter 7: Solid Waste Rules and Regulations. The Petitioner will be granted a variance from Rule 305(c) until December 31, 1978, subject to the conditions of the Order.

This Opinion constitutes the Board's findings of fact and conclusions of law in this matter.

ORDER

1. Mr. Leonard C. Triem d/b/a Triem Industrial Building Operations is granted a variance from the final cover requirements of Rule 305(c) of Chapter 7: Solid Waste Rules and Regulations until December 31, 1978, subject to the following conditions:

- (a) That the variance run from August 5, 1977 until December 31, 1978;
- (b) That Petitioner apply final cover by December 31, 1978 to all areas owned or controlled by Petitioner at the subject landfill site which have been used for the disposal of refuse;
- (c) That within thirty (30) days of the date of the Board's Order herein, Petitioner submit a permit application to build a barrier to seal the pond adjacent to the landfill;
- (d) That within sixty (60) days of the date of the Board's Order herein, Petitioner submit a permit application and project completion schedule addressing the disposal of wastewaters generated by Petitioner's steel processing plant;
- (e) That Petitioner shall take immediate and appropriate steps to test for and to correct any gas migration problems; and
- (f) That Petitioner monitor the subject landfill in accordance with Rule 318 of Chapter 7 for a period of three (3) years commencing December 31, 1978.

2. Within forty-five (45) days of the date of this Order, the Petitioner shall submit to the Manager, Variance Section, Division of Water Pollution Control, Illinois Environmental Protection Agency, 2200 Churchill Road, Springfield, Illinois, 62706, an executed Certification of Acceptance and Agreement to be bound to all terms and conditions of the variance. The forty-five day period herein shall be held in abeyance in the event of judicial review of this variance pursuant to Section 41 of the Environmental Protection Act. The form of said certification shall be as follows:

CERTIFICATION

I, (We), \_\_\_\_\_ having read the Order of the Pollution Control Board in PCB 77-261, understand and accept said Order, realizing that such acceptance renders all terms and conditions thereto binding and enforceable.

\_\_\_\_\_  
SIGNED

\_\_\_\_\_  
TITLE

\_\_\_\_\_  
DATE

IT IS SO ORDERED.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order were adopted on the 6<sup>th</sup> day of July, 1978 by a vote of 4-0.

Christan L. Moffett  
Christan L. Moffett, Clerk  
Illinois Pollution Control Board