

ILLINOIS POLLUTION CONTROL BOARD
November 1, 1979

ENVIRONMENTAL PROTECTION AGENCY,)
)
Complainant,)
)
v.) PCB 78-256
)
HERMAN DANEKAS AND DORA DANEKAS,)
d/b/a DANEKAS FARMS,)
)
Respondents.)

MS. LORETTA WEBER AND MS. JILL DRELL, ASSISTANT ATTORNEYS GENERAL,
APPEARED ON BEHALF OF THE COMPLAINANT.

MR. EDWARD T. GRAHAM, ATTORNEY AT LAW, APPEARED ON BEHALF OF THE
RESPONDENTS.

OPINION AND ORDER OF THE BOARD (by Dr. Satchell):

This matter comes before the Board upon an amended complaint filed February 20, 1979 by the Environmental Protection Agency (Agency) against Respondents Herman Danekas and Dora Danekas, d/b/a Danekas Farms (Respondent or Danekas). The complaint charged violations of §§12(a) and 12(d) of the Environmental Protection Act (Act) and Rules 203(a), 203(d) and 601(b) of Chapter 3: Water Pollution. The allegations involve a fish kill, violations of water quality standards for dissolved oxygen and unnatural color and turbidity, placing contaminants upon the land so as to create a water pollution hazard and failing to take all reasonable measures to prevent spillage of contaminants from causing water pollution. Hearings were held on June 27, 1979 and July 18, 1979 in Oregon, Ogle County. Members of the public attended but did not comment.

Prior to the hearing each party served interrogatories upon the other requesting the names of persons having relevant knowledge and information. The Hearing Officer excluded the testimony of Agency witnesses Matsanga, Daugherty and Paltel because their names had not been given Respondent. For the same reason, the Board upholds the Hearing Officer's ruling admitting the testimony of Respondent's witnesses over the Agency's similar objection.

Respondent owns a 226 acre farm situated in Sec. 21, T. 42 N., R. 1 E., 3 PM in Ogle County. This is an irregular tract bounded in part by Illinois Route 72 and the Milwaukee Railroad, and transected by that railroad. Mr. Danekas does not live on the farm, but conducts a grain operation which does not involve feeding cattle on the site (R. 364; Resp. Ex. 1). There is a tenant who lives on the site, but Danekas controls the farming operation (R. 37).

Count II alleges a fish kill which occurred in August, 1977 along a six and one-half mile unnamed tributary which flows north into the Rock River about one and one-half miles downstream from the confluence of the Rock and Kishwaukee Rivers, just south of Rockford and west of the Greater Rockford Airport, in Ogle and Winnebago Counties. For ease in discussion, relevant points have been numbered from 0 to 13 upstream from the Rock River to the Danekas farm, with approximate stream miles indicated. Numbers in parentheses (31 through 122) indicate points which are tributary to the unnamed stream but which do not receive Danekas drainage. The following is a brief description of the watershed:

- 0 Confluence with the Rock River, mile 0.
- 1 Kishwaukee Road crossing, mile .6. Thousands of fish which had been dead for three or four days were first observed here on August 15, 1977 (R. 344). Distressed minnows and suckers were observed by Mr. Alec Pulley of the Department of Conservation on August 29, 1977. Recently killed fish were counted on August 30, 1977 (R. 26, 59, 81). Drainage from about 12,000 acres passes through this point (R. 456).
- 2 Condon Road crossing, mile 1.4. Dead fish which had been killed within forty-eight to seventy-two hours were counted here. Decomposed fish which had been dead longer were not counted (R. 30, 43, 77, 81).
- 3 Edson Road crossing, mile 2.5. Dead fish were observed here; fresh were counted, decomposed were not (R. 31, 65).
- (31) Junction Road crossing. Clear water and live fish were observed on this tributary which does not receive drainage from the Danekas farm (R. 31, 65).
- (32) Browning-Ferris Sanitary Landfill. Danekas suggests this as a possible source of pollution. In the exhibits it appears to drain to location 31 (R. 422; Resp. Ex. 33, 34, 35; Comp. Ex. 6i).

- 4 Scott Road crossing, mile 3.5. Discolored water, dead algae and aquatic greens were observed. Badly decomposed fish were counted but not used for estimating the fish kill (R. 32, 66, 77, 80; Comp. Ex. 6h).
- (41) Scott Road, southeast branch. Clear water was observed; it was assumed that there were no dead fish upstream (R. 34, 67).
- 5 Scott Road, southwest branch, mile 4.3. Discolored water with a whitish substance was observed on August 30, 1977. No dead fish are reported here or at any point upstream (R. 34, 68, 78).
- 6 High Road crossing, mile 5.0. On August 30, 1977 Mr. Gerald Holmes of the Agency observed milky colored water at this point (R. 35, 92, 98, 125, 149). Respondent offered a number of black and white photos depicting this area (R. 409; Resp. Ex. 17, 18, 19, 20, 22, 23, 24).
- 7 Twelve-inch corrugated pipe, mile 5.2. Here the drainage, including that from the Danekas farm, emerges from a corrugated pipe which follows the natural drainage. During low flow the water runs mostly through the pipe, but during high flow it also travels on the surface. The parties agree on this, but there is dispute about where the pipe starts. An Agency witness described the drainage as milky on August 30, 1977 (R. 98, 102, 124, 132, 293, 305, 310, 317, 322, 373, 377, 436, 447, 452, 467, 477; Comp. Ex. 7a and b; Resp. Ex. 25, 27, 28).
- (71) One hundred feet upstream from twelve-inch corrugated pipe. Apparently Comp. Ex. 6c was taken upstream from the twelve-inch corrugated pipe and downstream from location 72.
- (72) Route 72. In March, 1977 two tank cars of phosphoric acid derailed and spilled at this point which is adjacent to Illinois Route 72 and tributary to locations 71 and 7 (R. 90, 144, 329, 433, 457, 466; Resp. Ex. 29, 30).
- (75) Glendennings Farm. An Agency employee visited this place on August 30, 1977 (R. 92). It appears to be tributary to location 7 but not location 71.
- 8 Section line, mile 5.6. Here the drainage channel meets the boundary of Section 17 and proceeds due south toward Utility Road. According to Respondent's witnesses, there is a beehive grate near here which is the origin of the twelve-inch corrugated pipe which drains at location 7 (R. 318, 368, 378, 444, 447, 450, 468; Resp. Ex. 26).

- 9 North of Utility Road, mile 6.0. At this point the drainage course turns southeast. Near here on August 30, Mr. Pulley observed flowing, discolored water but no dead fish (R. 35 367, 377, 466; Comp. Ex. 6g).
 - 10 Utility Road, mile 6.1. On August 30 Mr. Pulley walked the entire distance from the railroad track (location 12) to Utility Road. He observed discolored water the entire distance. However, on August 30 or 31 Mr. Holmes saw clear water at Utility Road. He testified that the stream from Danekas was going under Utility Road in a pipe, apparently the twelve-inch corrugated pipe which empties at location 7 (R. 37, 72, 136, 142, 300, 316, 377, 431, 465; Comp. Ex. 6f; Resp. Ex. 14, 15).
 - 11 Danekas property line, mile 6.3. In this area the watercourse is described as an intermittent stream or watercourse with hardpan on the bottom and vegetation on either side (R. 120, 141, 287, 376, 431, 464, 475; Comp. Ex. 6c, d, e; Resp. Ex. 14, 15).
 - 12 Railroad tracks, mile 6.6. The Danekas farm is bisected by the same railroad tracks mentioned in location 72. The drainage course runs from the southeast about 1600 feet across a field from a culvert which runs under the tracks. On the north side of the tracks three drainage courses converge. One of these runs down from location 13, where Respondent had stored about 1,000,000 pounds of fresh sweet corn ensilage. A five-inch clay field tile also empties into location 12. The parties agree that on August 30, 1977 a milky white liquid was flowing from this tile at a rate of several gallons per minute. The Agency claims that the tile followed the natural drainage from location 13 and that the discharge was silage leachate. However, Respondent claims the tile did not even come from the pile (R. 36, 54, 74, 96, 103, 120, 140, 284, 290, 309, 376, 389, 394, 440, 451, 462, 469; Comp. Ex. 6a; Resp. Ex. 12, 13).
- (121, 122) Route 72 revisited. Two drainage courses run down from the highway to the railroad tracks. Agency personnel visited there and did not observe the whitish water (R. 36, 75, 393).
- 13 Silage, mile 6.9. Between August 23 and August 29, 1977 Danekas stored 500 tons of fresh sweet corn ensilage on a 60 by 120 foot concrete slab (R. 388). The parties agree that the pile was producing leachate which was ponding to the north. The Agency claims it was flowing about 100 feet across a field to a point where it swirled into a hole in the ground which was the other end of the five-inch clay field tile which was emptying at the railroad tracks.

(location 12) some 800 to 1300 feet away (R. 37, 50, 56, 78, 93, 119, 128, 139, 284; Comp. Ex. 6b, 7c and d). On the other hand, Danekas contends that the leachate was flowing through a sixteen foot, twelve-inch corrugated pipe under a grass covered berm which he had constructed to drive equipment over the drainage way. From there the leachate entered a one acre detention area where it evaporated or percolated into the ground without reaching the stream (R. 282, 300, 307, 366, 382, 393, 445, 460, 474).

The Board has examined the Agency's offer of proof of the laboratory analyses of water samples (R. 162; Comp. Ex. 6). The Hearing Officer ruled these inadmissible as business records because a "threshold of credibility" was not reached. This ruling is incorrect under Procedural Rule 324 which states: "All other circumstances of the making of the writing or record, including lack of personal knowledge by the entrant or maker, may be shown to affect its weight, but shall not affect its admissibility." However, the record does show confusion about the locations where samples were taken. The following table presents the results of the analyses of leachate (13), of streamwater after mixing with the five-inch clay field tile effluent (12), of the effluent from the twelve-inch corrugated pipe (7) and of water upstream from the twelve-inch corrugated pipe (71):

	<u>Ex. 6b</u> <u>Location 13</u>	<u>Ex. 6a</u> <u>Location 12</u>	<u>Ex. 6d</u> <u>Location 7</u>	<u>Ex. 6c</u> <u>Location 71</u>
Dis. Oxygen	0.0*	0.0	1.2	6.2
BOD ₅	>3300	>1600	230	8
COD	178,000	4260	570	16
Ammonia	33.0	1.6	.06	.05
Nitrate	.6	2.6	2.6	22.0
Phosphorus	360.0	12.0	1.9	.93
TSS	2400	360	43	8
pH	3.8	4.8	7.7	8.2

*All units in mg/l except pH

Dead fish were first observed by a Mr. Cedarquist near Kishwaukee Road (location 1) on or about August 15, 1977 (R. 344). "Thousands" of dead fish from two inches to two feet were hanging in tree limbs where they had been left by high water following a rain at some time prior to that date. They had been dead for three or four days (R. 362). Sometime between the 19th and 21st Mr. Cedarquist went to Scott Road (4) during a rainstorm. He observed water which was gray in the center and brown on the sides (R. 350, 353). On August 22, Mr. Pulley first learned of the fish kill, but did not investigate until August 29, 1977 (R. 58). Mr. Danekas testified that he first stored corn silage on August 23, 1977 (R. 380). The Agency apparently agrees with this date (Amended Complaint, ¶5). It is therefore unlikely that the silage could have caused the earlier fish kill.

At locations 1, 2, 3 and 4, Mr. Pulley observed both fresh killed and decomposed fish on August 29 and 30, 1977. Only the fresh fish were counted. Mr. Pulley stated that these had either been two fish kills or one kill of long duration (R. 80). At location 1 Mr. Pulley observed only five fresh killed fish in 100 feet (R. 29). However, Mr. Cedarquist described the earlier kill as involving thousands of fish at that location (R. 346). At location 4 Mr. Pulley observed decomposed fish and "greatly discolored water, dead algae and aquatic greens" (R. 32). One would expect silage to be rich in nutrients and oxygen demanding waste. Even with the high levels of suspended solids and low pH shown in the analyses, one would not expect to see dead algae and aquatic greens (Comp. Ex. 6). They would probably thrive in such a waste stream since they are oxygen producers, subject to restriction of sunlight from high suspended solids and eventual eutrophication. Dilution and utilization of nutrients along several miles of meandering, intermittent stream should render these wastes altogether harmless to algae and aquatic plants, as indicated by the analyses (Comp. Ex. 6d).

Mr. Cedarquist, who first reported the fish kill, testified that on or about August 23, 1977 he accompanied Mr. Pulley and John Theandor of the local fire department to the scene of the tank car derailment (location 72) which had occurred in March, 1977 (R. 356). This appears to contradict Mr. Pulley's testimony that he first investigated the fish kill on August 29 (R. 56). Mr. Theandor does not mention this incident in his testimony (R. 325). Mr. Cedarquist, however, says that on this date someone waded, knee deep, in what appeared to be fresh cement in the watercourse near the scene of the derailment (R. 356). There is no mention of cement being spilled. However, if lime were spread on a pond of phosphoric acid, the result could be rather like cement.

On August 30, Mr. Holmes went first to the scene of the derailment at location 72 on the assumption that it was the most likely cause (R. 90). He reported that there was no flow from the spill area on that date. The analysis of the water at location 71, showing low phosphate, tends to confirm this observation (Comp. Ex. 6c). However, this does not rule out the likelihood that there was flow from the spill area during the rains which are described by Mr. Cedarquist. In the event the phosphoric acid was covered with excess lime, the runoff could also be harmful to fish. The pH 8.2 observed at location 71 may indicate this latter possibility.

The evidence in this case is compatible with the following chain of events. A heavy rainfall occurred on or about August 11. At that time there was a spill of toxic materials or elution of the phosphoric acid, or possibly excess lime, into the lower reaches of the stream. A massive fish kill resulted. As the high water receded, the stream was repopulated with fish from the Rock River after the stream was washed free of the chemicals. As low flow conditions returned, decomposing fish, algae and vegetation resulted in a low-oxygen situation, producing a secondary fish kill. In any event, Danekas did not cause the first kill and it is not surprising to see fish dying in a stream two weeks after a massive fish kill.

Respondent has advanced some additional hypothetical causes of the fish kill. There is a landfill at location 32 which apparently drains through location 31 to location 3 (R. 422; Resp. Ex. 33, 34, 35). This landfill is the same one which is involved in an enforcement case pending before the Board, County of Ogle v. Browning-Ferris Industries, Inc., PCB 78-149. In that case there are allegations of leachate flows which could pose a threat of water pollution. However, Mr. Pulley observed live fish and clear water at location 31. Furthermore, there were dead fish at location 4 which apparently does not receive drainage from location 32 (R. 31).

Mr. Danekas testified that in the fall of 1977 he observed about twenty dump truck loads worth of hog manure in the watercourse at a location approximately 1000 to 1300 feet from Scott Road, probably upstream from location 41 (R. 425, 447; Resp. Ex. 31, 32). Mr. Pulley however, observed clear water at location 41 but discolored water at location 5. He did not walk up the branch far enough to see the manure Mr. Danekas describes (R. 34, 67). Although oxygen demanding waste is not necessarily colored, it is likely that the hog manure would produce discolored water if it were contributing to the waste load downstream. However, this is another hypothesis which the Agency's evidence does not fully exclude. Mr. Danekas also says there are other feedlots, silage piles and drainage tiles in the vicinity (R. 381, 434).

Dead fish were observed at locations 1, 2, 3 and 4, with all recently killed fish downstream of location 3. The fish kill is separated from the silage by about three miles. The link between the two depends on circumstantial evidence. Respondent has offered evidence not only of alternative causes of the fish kill, but also evidence which directly contradicts the chain of causation.

Mr. Pulley walked the watercourse from the railroad (12) to Utility Road (10). On August 30 he observed discolored water the entire distance (R. 37). However, on August 30 or 31, Mr. Holmes saw clear water flowing under Utility Road (10). He stated that Danekas' flow was underground in a pipe. He apparently believed that the twelve-inch corrugated pipe (7) began at some point upstream from Utility Road (R. 136, 141). Respondent's witnesses, however, established that the pipe began downstream of Utility Road at the beehive grate (8) and that the flow from Danekas was over the surface at Utility Road (R. 300, 316, 377, 431, 465; Resp. Ex. 25, 27, 28). The contradiction between the Agency's witnesses, together with their uncertainty about the watercourse casts doubt on the causal connection between the silage and the fish kill.

Neither of the Agency's witnesses walked from the silage (13) to the railroad tracks (12) where the five-inch clay tile emptied. Their testimony that the leachate flowed into a hole in the ground does not contradict Danekas' testimony that it was flowing into a sixteen foot pipe under a grass roadway to a retention area (R. 282, 300, 307, 366, 382, 393, 445, 460, 474). The Agency's witnesses did not testify to the absence of such roadway and detention area and they could not since they did not walk the drainage way beyond the hole (R. 54). A grassy field for evaporation and percolation would be a satisfactory treatment system for the deoxygenating waste from the silage.

On August 31, 1977 Mr. Danekas dug up the lower end of the five-inch clay tile (12) and plugged it (R. 391). Mr. Danekas testified that he subsequently followed the tile with a tile probe. It did not follow the water course to the silage pile (13), but proceeded 150 feet to a higher area in the field to the north between that watercourse and the railroad tracks. Later he had to unplug the tile to dry that area to pick his corn (R. 392, 398, 443).

The Agency did not perform a dye test to directly demonstrate that the silage leachate was the source of the tile drainage. The Board must weigh Respondent's direct evidence against the Agency's conclusion which was based on the general lay of the land and the fact that the discharge was a milky color which, downstream, smelled "somewhat" like the silage (R. 98). Mr. Danekas testified that it was not unusual after a summer rain for the discharges to be milky because of silt accumulation during dry weather (R. 379).

Section 30(c) of the Act provides that the burden of proof in an enforcement case is upon the Agency. After considering the evidence, the Board finds that the Agency has not met this burden by presenting clear and convincing evidence to substantiate the allegations of Count II. Count IV alleged violation of §12(d) by depositing contaminants upon the land so as to create a water pollution hazard. Count V alleged violation of Rule 601(b) of Chapter 3: Water Pollution by failing to take all reasonable measures to prevent spillage of contaminants from causing water pollution. Counts IV and V will be dismissed since the Agency has failed to establish that the silage pile threatened water pollution.

Count I charges violation of §12(c) of the Act and Water Rule 203(a) in that: "The events described in paragraphs 6 and 7 of this Count I caused unnatural color or turbidity in the waters. . . ." Paragraph 6 alleges that liquid leached from the corn pulp into a drainage tile. Paragraph 7 alleges discharge from the tile into the unnamed tributary. Although Respondent has admitted color and turbidity in the testimony, the allegations are expressly limited to a charge of unnatural color and turbidity caused by the silage. Since the Agency has failed to establish this causation, Count I will be dismissed. Count III alleges dissolved oxygen of less than 5.0 mg/l in the receiving stream in violation of Water Rule 203(d). Although the analysis shows low oxygen, the allegation is again that the silage pile caused the condition. Furthermore, Mr. Holmes was uncertain about where this sample was taken (R. 110; Comp. Ex. 6a). Count III will also be dismissed.

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

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ORDER

The complaint in this proceeding is dismissed.

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 1st day of November, 1979 by a vote of 7-0.

Christan L. Moffett (ps)
Christan L. Moffett, Clerk
Illinois Pollution Control Board