

ILLINOIS POLLUTION CONTROL BOARD
June 22, 1979

PEOPLE OF THE STATE OF ILLINOIS,)
)
 Complainant,)
)
 v.) PCB 73-252
)
 D.A. STUART OIL CO., LTD.,)
 a foreign corporation,)
)
 Respondent.)

MELVIN A. RIEFF AND ALAN L. FULKERSON, ASSISTANT STATE'S ATTORNEYS, APPEARED ON BEHALF OF COMPLAINANT.
ROBERT E. PFAFF, JENNER & BLOCK, APPEARED ON BEHALF OF RESPONDENT.

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

This enforcement case has been before the Board since June 18, 1973. Discovery and hearings carried the matter into the first quarter of 1975, with briefs and arguments generally completed by June of that year. At that point in time there were two very similar cases before the Board, PCB 74-191 and PCB 74-193, both of which were enforcement cases against Bulk Terminals Co. (Bulk). Both had previously appealed the Board's jurisdiction in those matters, and by June, 1975, when the Board was preparing to decide this case, the Appellate Court, First District, upheld Bulk's position concerning Board jurisdiction. Considering the similarity between the Bulk case and this case, and the fact that the First District's opinion in Bulk was to be appealed to the Illinois Supreme Court, the Board felt that it would be in the best interest of all involved if a decision in Stuart were stayed until the Illinois Supreme Court ruled on the jurisdictional question in Bulk. On July 12, 1978, the Board received a copy of the mandate of the appellate court in Bulk granting the Board's motion to dismiss Bulk's interlocutory appeal, pursuant to a Supreme Court decision that Bulk had failed to exhaust its administrative remedies. The Bulk appeal having been resolved, the Board shall proceed to decide the case against Stuart.

This action was commenced by the State's Attorney of Cook County in the name of the People of the State of Illinois (People) on June 18, 1973, with the filing of a four count

complaint. Respondent herein is the D.A. Stuart Oil Co., Ltd. (Stuart), a foreign corporation. The People allege a violation of Section 9(a) of the Environmental Protection Act (Act) and Rule 103 of the Board's Air Pollution Control Regulations (Regulations). Hearings were held on November 5, 19 and 21, 1974, and January 8 and 9 and February 27, 1975. Count 1 alleges strict liability on the part of Stuart for the results of an occurrence at its facility. Count 2 alleges failure on Stuart's part with respect to prevention of such occurrence, while Count 3 alleges failure to provide adequate facilities and training to control the situation subsequent to the occurrence. Count 4 alleges failure to obtain necessary permits for certain equipment located at the facility. In its brief filed May 14, 1975, Stuart made a motion to Strike and Dismiss the complaint (R.9). The motion is hereby denied.

D.A. Stuart Oil Co. has been in business in the Chicago area for over 100 years, manufacturing and marketing petroleum and chemical products to the metal working and automotive industries. (R.613-619). Prior to March 20, 1973, Stuart stored sulfur monochloride (S_2Cl_2), intended for use in the production of cutting oils, in a tank on its premises located on South Troy Street in Chicago, Illinois. On March 20, subsequent to the transfer of about 8,000 gallons of S_2Cl_2 to Stuart's storage tank from a railroad tank car, the storage tank started to leak, exposing thousands of gallons of the S_2Cl_2 to the atmosphere. This leakage resulted in the formation of clouds of hydrochloric acid and sulfur dioxide, which reached heights of approximately 250 feet and stretched for several blocks (R.22,110). Although the situation was generally under control by late in the evening on March 20, another short emission occurred on the 21st during a transfer operation, which resulted in the evacuation of a nearby industrial facility. The People allege that many failures on Stuart's part regarding its storage of S_2Cl_2 resulted in injuries and damage which should have been lessened, if not entirely avoided, by the exercise of ordinary care. Stuart responds that the entire episode was an unfortunate accident involving a piece of non-production equipment and that Stuart did everything that could be reasonably expected of it to abate the resulting pollution.

The first witness for Complainant was Sidney M. Marco, Assistant to the Commissioner, Department of Environmental Control, City of Chicago (R.14-80). Mr. Marco stated that, when he arrived at the scene of the leak, emissions were very dense and reached as high as 250 feet above the ground. Upon discussion with the plant chemists and other personnel, he suggested the addition of lime to neutralize the acid vapors which were presently being emitted from the building surrounding the leaking tank. Mr. Marco then contacted the City of Chicago by radio and instructed them to procure the

needed lime and send it out to Stuart. Subsequently a fire department truck arrived with bagged lime which was thrown into the building in an attempt to reach the source of emissions. Soon thereafter, two tanker trucks, one loaded with powdered lime and one with pebble lime, arrived. The powdered lime truck, having a screw-type discharge at its back end, was backed into the side of the building, and the lime was discharged into the pit where the S_2Cl_2 was reacting. The emissions subsided immediately, and the pebble lime truck was sent back as unneeded. The next day, according to Mr. Marco, a crew of chemical workers pumped the remaining 2,000 gallons of S_2Cl_2 from the tank into an adjacent railroad car. During this operation additional fuming occurred which resulted in a manufacturing facility located nearby sending home its night shift operation. The tank was not secured until late on May 21 due primarily, according to Mr. Marco, to the cautious procedures used by the chemical workers in pumping the remaining S_2Cl_2 from the storage tank. Mr. Marco indicated that the emissions were a type of acid mist which was neutralized by addition of the highly basic lime.

The Complainant's second witness was Robert F. Gasvoda, Vice-President of Stuart. This witness indicated that approximately 4,500 gallons of the S_2Cl_2 were lost during the leak and that the storage tank was destroyed. In addition, the witness indicated that approximately 1,100 gallons of the S_2Cl_2 had been consumed by the lard oil which Stuart had added to the leaking area prior to the addition of the lime.

George Kuzell, an oil compounder for Stuart, testified next for the Complainant. This witness indicated that he had not been instructed by Stuart's management about what to do if a spill occurred while unloading a railroad tank car into the storage tank or in the event of a leak in the storage tank itself. In addition, the witness testified that there was not sufficient empty tankage available into which the contents of a leaking S_2Cl_2 storage tank might be pumped. The witness also testified that the masks supplied by Stuart in this area were not suitable for combating the emissions that occurred and that Stuart had not stored any S_2Cl_2 since the time of the accident.

Stuart's plant manager, Charles Zernick, testified that he and other plant personnel poured water from a garden hose over the leaking tank and into the pit in which the tank resided in an effort to dilute what was at that time considered a minor leak. Upon realization that the leak was indeed a major leak, he informed management personnel and a decision was made to add lard oil pumped from a 5,000 gallon tank in an area away from the leak area. By this time, the fire department had been notified and had arrived on the scene. Pumping continued for approximately one hour, ending somewhere between 8:00 and 9:00 (R.202). At that time the fumes were

headed in a generally southwest direction. Soon thereafter, the lime was applied to the leaking tank and pit. At that time all odor and fuming ceased completely, although the witness indicated that the fuming had been greatly reduced by the application of the lard oil. Mr. Gerenick also indicated that there were no pumps or any other method of drainage associated with the storage facility and pit.

Another oil compounder working for Stuart, George Dieck, Jr., testified that he was not given instruction as to the procedures in the event of an emergency, but had gone to his supervisor, Mr. Gerenick, when he discovered the leaking storage tank. In addition, he testified that thick, heavy smoke persisted for some time after the lard oil was applied to the pit (R.239).

The People next produced a series of eight citizens who were either residents or persons in the vicinity of Stuart when the leak occurred. These witnesses all testified generally as to the symptoms they experienced when they were exposed to the emissions from Stuart, including coughing, difficulty in breathing, dizziness, faintness, vomiting, irritation of eyes, nose and throat, blurred vision, prolonged headaches and acid burns over contacted areas of the body. Although some of the witnesses indicated that the discomfort was temporary, others indicated that the discomfort caused by the emissions persisted to the day of the hearing, seventeen months after the date of the accident (R.371). Other victims were required to stay in the hospital for a week or more (R.355,385,252). One victim, Mrs. Matilda Enrika, required a one week stay in a hospital and upon release, a weekly doctor's visit for one month for x-ray treatment. At the time of the hearing, she was on a monthly schedule for examination and has suffered a permanent breathing disability which requires the use of a device called "little puffer" to aid her in times of shortness of breath (R.253-4). Exhibit 11 indicates the types of private claims filed against Stuart and payments made by Stuart's insurance carrier in settlement of these claims.

In addition to the damage to persons, property damage to paint on houses, metal fences, roofs, windows, grass, automobiles, etc., occurred. Testimony by the citizens also indicated that the fumes interfered with the enjoyment of life and property for those in the area of the accident.

Irving Bernstein, a chemical engineer employed by the U.S. Environmental Protection Agency, indicated that from his personal experience a number of procedures and pieces of equipment should be utilized by people storing toxic materials such as S_2Cl_2 . Included in his review of reasonably safe procedures and practices were periodic testing of the tank, empty reserve tanks to pump off the chemical in case of a leak, location of the pumps in an area away from the storage

tanks to prevent their being engulfed with the fumes and rendered inaccessible, gas masks and protective clothing for the employees, storage tanks above ground and surrounded by permanent concrete drainage pits with permanent pumps installed, availability of neutralizing chemicals to be applied in the case of a leak, and a program of emergency procedures with employees instructed about such procedures (R.430-560).

Bernard Friedman, a PhD in chemistry and a lecturer at the University of Chicago, testified about the efficacy of adding hydrated lime to a spill of S_2Cl_2 as opposed to adding lard oil to such a spill. His conclusion was that lard oil would be preferred if water was not present, but that the lime would be a preferred method in the case of wet S_2Cl_2 . In addition, he testified about the procedures and equipment to be used in preparation for and in combating a chemical spill. His conclusions were very much the same as those of the prior witness, Irving Bernstein (R.523-598). Dr. Friedman also testified about the effects of hydrochloric acid mist on people and things.

After the People presented their case in chief, Stuart produced one witness on its behalf, Mr. George G. Spahn, President of the D.A. Stuart Oil Co. Mr. Spahn testified about the history of the storage tank, indicating that to his knowledge it had been scraped and painted and "sonically" tested, apparently by use of a hammer. Mr. Spahn further indicated that no S_2Cl_2 had been stored or utilized at the facility since the day of the accident, that the tank had been scrapped, that the reactors had been shipped out of state, and that as President of Stuart, he had no knowledge of any plans by Stuart to reintroduce S_2Cl_2 into production at the facility.

Stuart alleges that the occurrence was "this unfortunate accident which resulted in air pollution" (Respondent's Brief, page 1). The Board agrees that the leak of the S_2Cl_2 and the resulting air pollution was accidental in that there was no plan or guilty knowledge on the part of Stuart with regard to the emissions. The Board has found in the past that the Act does not demand proof of guilty knowledge or mens rea to support a finding of violation. Phillips Petroleum Co. v. EPA and Chicago & Northwestern Transportation Co., Ill.App.3rd _____ (2nd District, 1979), Meadowlark Farms, Inc. v. PCB, 17 Ill.App.3rd 851, 308 NE2nd 829 (1974), Bath, Inc. v. PCB, 10 Ill.App.3rd 507, 294 NE2nd 778 (1973).

However, in determining a violation in a case such as this the Board must, according to Section 33(c) of the Act, consider certain factors which in effect weigh the value of the pollution source against the effects of such pollution on the People of the State of Illinois and their property. There appears to be no question about the social and economic value of Stuart nor even the suitability of Stuart to the

area where it is located. The concern of the Board in this case is the character and the degree of injury to or interference with the health, general welfare and physical property of the People of the State. That such injuries did occur was proven by the testimony of the various victims and the insurance claims and settlements presented in Complainant's Exhibit 11. Indeed, Stuart does not deny the injuries and states only that "none of the injuries to persons were shown to be serious, or of a permanent nature" (Stuart Brief, page 9). The record thus supports the allegation that people were inconvenienced and harmed physically and that property was damaged and destroyed. The issue before the Board now is whether this injury and interference could have reasonably been reduced or eliminated by Stuart in this case.

Stuart alleges it did everything that could reasonably be expected to abate the pollution and minimize the resulting damages to persons and property. The facts in the record, however, indicate that it was the expertise of an employee of the Chicago Department of Environmental Control and his personal contacts with other industry in the area, along with the Chicago Fire Department, that finally resulted in control of the acid mist emissions that were causing the injuries and damage. Although Stuart pumped a large amount of lard oil into the pit to neutralize the effect of the S_2Cl_2 , it was the company's earlier addition of water which apparently caused the lard oil to be relatively ineffectual. It was not until 8:00 or 9:00 in the evening, approximately five to six hours after the leak was discovered, that the pollution was abated with the use of powdered lime. The record shows that Stuart not only failed to have an emergency plan and equipment designed to cope with such situations, but also had not instructed its employees in the correct procedures for handling leaks of a dangerous and reactive material such as S_2Cl_2 . It appears that there was material available with which to neutralize the S_2Cl_2 using a proper procedure, but it is unclear whether the material was available by design or by accident. It was clear from the record, however, that most of the equipment and material that Stuart alleges were available for use in an emergency was in fact rendered inaccessible by the very leak it was supposed to help control.

In EPA v. Chicago & Northwestern Transportation Co. & Phillips Petroleum Co., PCB 76-155, decided June 8, 1978, the Board found that:

"if the people of the State of Illinois are to be exposed to the danger of pollution, it must be the burden of those who own and/or operate the potential source to anticipate and make preparations to abate this pollution should it occur. The owners and/or operators of these sources can not expect the People of the State of Illinois to defend themselves against such

pollution without the help of those inherently best equipped and most knowledgeable with respect to their protection."

Considering the record before us, the Board finds Stuart in violation of Section 9(a) of the Act in that Stuart unreasonably caused or threatened or allowed the emission of dangerous contaminants into the environment so as to cause air pollution in Illinois.

Having found Stuart in violation of Section 9(a) of the Act, the Board must now consider whether the facts in this case warrant imposition of a penalty and, if so, in what amount. Board penalties are generally assessed to produce an incentive for future compliance with the Act and the Board's Regulations by both the violator and others. In this case, the Board will consider Stuart's activities concerning the S_2Cl_2 storage tank prior to the occurrence of May 20. The Board has previously noted the lack of preparation on Stuart's part for abatement of emissions that might occur due to accidental discharges. Beyond this lack of preparation, the record also indicates that Stuart did only cursory maintenance on the tank, including scraping and painting the exterior and tapping the tank with a hammer in an attempt to determine how sound the walls were. The tank was nineteen years old, and the record is unclear as to how often even that cursory maintenance was performed (R.622,655). Considering the reactive nature of S_2Cl_2 and the fact that it forms hydrochloric acid upon exposure to moisture, it is reasonable to expect that a preventive maintenance schedule would include much more frequent inspection of the tank, particularly the interior, and a much more rigorous test procedure to determine the extent of internal corrosion, if any, which has occurred (R.434). The Board finds that Stuart had not followed normally accepted industry practice with regards to preventive maintenance of the S_2Cl_2 storage tank and did not use any reasonable method to determine the internal status of the tank with respect to corrosion.

Considering the lack of reasonable care exercised by Stuart both with respect to the inspection and maintenance of the tank itself and the lack of a contingency plan to abate the pollution once it occurred, the Board finds that a penalty is warranted in this case to help further the intent of the Act. Cognizant of the fact that Stuart sustained considerable loss due to the damage occasioned by the leaking storage tank and the fact that Stuart itself no longer utilizes S_2Cl_2 at its Chicago facility, the Board will assess Stuart a penalty of \$2,500.00 for the violation of Section 9(a) of the Act.

With regard to the allegation that Stuart is in violation of Rule 103(b)(2) of the Board's Regulations, the Board finds that Stuart was in violation for the period commencing

February 1, 1973 and ending March 20, 1973. The Board finds this violation to be minor in nature and has no reason to believe that the lack of a permit contributed in any way to Stuart's pollution problem. We will therefore assess no penalty for this violation.

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

ORDER

It is the Order of the Pollution Control Board that:

- 1) D.A. Stuart Oil Co. has violated Section 9(a) of the Environmental Protection Act in that Stuart unreasonably caused or threatened or allowed the emission of dangerous contaminants into the environment so as to cause air pollution in Illinois.
- 2) D.A. Stuart Oil Co. shall pay a penalty of \$2,500.00 for the violation in subparagraph (1) above, such penalty to be paid within 45 days of the date of this Order by certified check or money order payable to the State of Illinois, Fiscal Services Division, Illinois Environmental Protection Agency, 2200 Churchill Road, Springfield, Illinois 62706.
- 3) D.A. Stuart Oil Co. violated Rule 103(b)(2) of the Board's Air Pollution Control Regulations in that it failed to acquire an operating permit from the Illinois Environmental Protection Agency for the period commencing February 1, 1973 and ending March 20, 1973.

Mr. Werner dissented.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order were adopted on the 22ND day of June, 1979 by a vote of 4-1.


Christan L. Moffett, Clerk
Illinois Pollution Control Board