

ILLINOIS POLLUTION CONTROL BOARD

June 8, 1978

ILLINOIS ENVIRONMENTAL)
PROTECTION AGENCY,)
)
Complainant,)
)
v.) PCB 77-208
)
SOUTHERN CALIFORNIA)
CHEMICAL CO., INC.,)
a California corporation,)
)
Respondent.)

CAROL M. PEARCE, ASSISTANT ATTORNEY GENERAL, APPEARED ON BEHALF OF THE COMPLAINANT.

ZUKOWSKI, ZUKOWSKI, POPER & ROGERS (MR. H. DAVID ROGERS, OF COUNSEL), ATTORNEYS AT LAW, APPEARED ON BEHALF OF THE RESPONDENT.

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

This matter comes before the Board on the August 3, 1977 Complaint brought by the Illinois Environmental Protection Agency charging Southern California Chemical Co., Inc. ("Southern") with violation of Section 9(a) of the Act. A hearing was held on March 14, 1978. The parties filed a Stipulation and Proposal for Settlement on March 20, 1978.

Southern owns and operates a plant which is located near 17415 East Jefferson Street in Union, Illinois in McHenry County. There are about ten homes in the vicinity of this facility. A food processing company is located across the street. Southern's plant is located nearly 600 feet southeast of the Evergreen Park School (which has 10 teachers and an enrollment of approximately 250 students).

Southern's facility, which reclaims copper etchant solutions and manufactures cupric oxide, uses 2 basic processes to recycle and refine spent etching solutions to produce cupric oxide. The cupric oxide is ultimately sold for use as an animal feed additive and as a wood preservative, while the purified etchant solution is sold back to the users.

In the first process, spent copper etching solution bought from circuit board producers is pumped to a reactor where a caustic is added and the material is heated until the ammonia vapor is all removed. The ammonia vapor is fed through a hydrochloric acid scrubber to produce ammonium chloride which is reused to produce new etching solutions. The remaining solid in the reactor is the black copper oxide.

In the second process, waste copper circuit boards, ammonia, water and carbon dioxide are mixed in bins to make a copper solution. This solution is pumped from the bins and sent to a storage tank. After the circuit boards are removed, the copper solution is sent from the storage tank to a distillation unit where it is heated to a temperature of 218° F. (to vaporize off the ammonia and carbon dioxide which are reused). When the distillation is complete, copper oxide remains. A packed water scrubber controls this process.

Additionally, there is a third process, which is related to the two copper oxide processes, in which two mixing tanks blend water with ammonia and ammonium chloride to produce the new etching solution. The ammonium chloride used in this process is a by-product of the caustic copper oxide process.

Moreover, Southern also has a ferric chloride process (not presently in use) in which copper containing spent solution is combined with scrap steel. The iron replaces the copper in solution and is then sent to a pair of reactors where chlorine is added to form ferric chloride.

The Company has experienced problems with ammonia vapor emissions for several years, primarily due to human error. Emissions arose from spillage of waste material, improperly operated equipment within the plant, and improper connections to tank cars containing anhydrous ammonia. Specific incidents occurred on June 19, 1975 (tank car leak); July 9, 1975 (spilled etching solution within plant); April 19, 1977 (mix tank cover plate failure); May 6, 1977 (spilled etching solution within plant); July 30, 1977 (caustic soda tank explosion); and August 26 and 29, 1977 (failure of control systems). As a result of citizen complaints pertaining to ammonia odors, the Agency filed a Complaint which alleged that from August 4, 1975 until the filing of the Complaint, Southern's emission of ammonia gases caused air pollution in violation of Section 9(a) of the Act.

After the Complaint was filed, the State of Illinois filed suit in the Circuit Court of McHenry County, People v. Southern California Chemical Company, Inc. 77 CH 1255, relating to the

incidents which occurred at the Company's facility on August 26 and August 29, 1977. By agreement of the parties, an injunction was entered which required that the business shut down its operation until a secondary scrubber system to control emissions from the facility was installed. The plant resumed operation after the scrubber system was installed.

Subsequently, the Company met with the Agency to develop a detailed program to reduce ammonia emissions. This three phase program, which has been fully delineated in the settlement agreement, included the redesign and installation of a new secondary scrubber system; the purchase and installation of roof fans with scrubbers; and the design, fabrication and installation of various other types of pollution control equipment. Additionally, Southern has expanded its control program to include an ammonia detection device with warning alarm which is attached to the public address system; extra pH meters; an automatic digital readout meter and annular nozzle for the drum loading station; an efficient secondary scrubber installed in series with the primary scrubber; daily operating and maintenance records for the second and third shifts; and better housekeeping practices on tank identification, pump maintenance and spare pump availability.

Basically, the proposed settlement agreement provides that the Company will: (1) pay a stipulated penalty of \$5,000.00 for its admitted violation of Section 9(a) of the Act; (2) provide the Agency (not later than 10 days after the Board Order approving the settlement) with a written program containing safety standards, employee training and education methods, preventive maintenance rules and methods of handling upset/spill malfunction incidents; (3) continue to employ a responsible supervisor on duty each shift that the facility is operating; and (4) install a hood vent/fan system to control emissions at its drum loading facility, if the design and installation of the new drum loading station is not adequate to reduce or eliminate odorous emissions.

In evaluating this enforcement action and proposed settlement, the Board has taken into consideration all the facts and circumstances in light of the specific criteria delineated in Section 33(c) of the Act. Incinerator, Inc. v. Illinois Pollution Control Board, 59 Ill. 2d 290, 319 N.E. 2d 794 (1974).

There is nothing in the record to indicate that the Agency did not fully comply with Procedural Rule 307(d) by public advertisement in a newspaper of general circulation and by giving adequate notice to all necessary parties. Although Mr. Franks did not comply with the provisions of the Board's Procedural Rule 310 on intervention, by filing a timely petition for intervention with the Board and serving copies on each party prior to the hearing date, the Hearing Officer characterized the Village as an intervenor and permitted "Mr. Franks, as attorney for the village of Union, to intervene" and allowed him "to call witnesses on behalf of the Village of Union." (R. 33)

These witnesses complained about the operations of the Company's plant. Their testimony confirmed the stipulated fact that ammonia vapor emissions, primarily during the summer months, had adversely affected the comfort of some people residing near the plant.

Mr. Ronald Miller, a 28 year old carpet installer and Village Trustee who lives about 2-1/2 blocks from the plant, testified that he was greatly bothered by the ammonia about 10 times during the past summer (R. 33). He felt that it would help considerably if there were a competent supervisor on duty during the evening and weekend shifts (R. 32, R. 34). Mr. Miller testified that he couldn't recall being affected by emissions after August 29, 1977 (R. 34).

Mrs. Donna Gahl, the Village Treasurer, who lives about 1-1/2 blocks from the facility, testified that "... in the winter when the windows are closed, you don't notice anything, but in the summer... in the evenings when you have plans to be out in the yard, it gets strong - you just don't go out; you go in the house." (R. 39-40) Mrs. Gahl testified that she was affected by ammonia fumes "until the cold weather set in" but recalled no major incident since August 29, 1977 (R. 45-46).

Mrs. Clarence Miller, who lives about 1-1/2 blocks from the plant, testified that "...during the summer, you can smell some ammonia almost every evening..." and stated that her husband called the plant "maybe two or three times when it was really unbearable." (R. 50)

Mr. Charles Trieb, who lives about 6 blocks from the plant, stated that he experienced some discomfort during a past incident, and worried that it might affect him "years from now." (R. 66)

Mr. Robert Evans, the plant manager, testified that about 3 or 4 of the plant's 25 employees live in the town of Union, including the mayor (who is the Company's salesman and former office manager) and the production foreman (R. 56). Mr. Evans

indicated that steps had been taken to make the management during the weekends and evenings more accountable (R. 58). He also noted that the Company had spent over \$200,000 for plant improvements to make sure that no further incidents occurred (R. 62).

All written complaints concerning this plant occurred prior to the corrective measures instituted by the Respondent. The Agency and Southern California Chemical Company, Inc. have reached a stipulated agreement relative to this matter in negotiations between both parties which took into account all conditions and details referenced in all documentation up to that point. It is the opinion of this Board that the Stipulation speaks for itself, and, accordingly, the Board accepts the Stipulation and Proposal for Settlement and imposes the stipulated penalty of \$5,000.00 .

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

ORDER

It is the Order of the Pollution Control Board that:

1. Southern California Chemical Co., Inc. has violated Section 9(a) of the Illinois Environmental Protection Act from August 4, 1975 until August 3, 1977.

2. Within 35 days of the date of this Order, Southern California Chemical Co., Inc. shall pay the stipulated penalty of \$5,000.00 , payment to be made by certified check or money order to:

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

3. Southern California Chemical Co., Inc. shall comply with all terms and conditions of the Stipulation and Proposal for Settlement filed March 20, 1978, which is incorporated by reference as if fully set forth herein.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order were adopted on the 8th day of June, 1978 by a vote of 5-0.

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