

ILLINOIS POLLUTION CONTROL BOARD
February 24, 1983

ILLINOIS ENVIRONMENTAL PROTECTION)
AGENCY,)
)
Complainant,)
)
v.) PCB 78-247
)
CONTINENTAL GRAIN COMPANY, a)
Delaware Corporation,)
)
Respondent.)
-----)
CONTINENTAL GRAIN COMPANY, a)
Delaware Corporation,)
)
Petitioner,)
)
v.) PCB 79-111 (Consolidated)
)
ILLINOIS ENVIRONMENTAL PROTECTION)
AGENCY,)
)
Respondent.)
-----)
ILLINOIS ENVIRONMENTAL PROTECTION)
AGENCY,)
)
Complainant,)
)
v.) PCB 79-114
)
CONTINENTAL GRAIN COMPANY, a)
Delaware Corporation, and the)
CHICAGO REGIONAL PORT DISTRICT)
an Illinois municipal corporation,)
)
Respondents.)

MR. WILLIAM J. BARZANO, JR., ASSISTANT ATTORNEY GENERAL, APPEARED ON BEHALF OF THE COMPLAINANT.

MR. PETER ORLINSKY, ATTORNEY AT LAW, ALSO APPEARED ON BEHALF OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY.

MARTIN, CRAIG, CHESTER & SONNENSCHNEIN (MR. ROY M. HARSCH, OF COUNSEL) APPEARED ON BEHALF OF RESPONDENT CONTINENTAL GRAIN COMPANY.

MR. WILLIAM F. DART, ATTORNEY AT LAW, APPEARED ON BEHALF OF RESPONDENT CHICAGO REGIONAL PORT DISTRICT.

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

This matter comes before the Board on the September 11, 1978 Complaint brought by the Illinois Environmental Protection Agency ("Agency") in PCB 78-247.

Count I of the Complaint in PCB 78-247 alleged that, from March 1, 1976 until September 11, 1978, Continental Grain Company ("Continental") operated the watercraft loading spouts at Elevator B of its Chicago grain elevator terminal facility ("facility") without a permit from the Agency in violation of Rule 103(b)(2) of Chapter 2: Air Pollution Control Regulations ("Chapter 2") and therefore in violation of Sections 9(a) and 9(b) of the Illinois Environmental Protection Act ("Act").

Count II alleged that, from March 1, 1976 until September 11, 1978, Continental operated its barge loading spouts at Elevator B so as to allow the emission of particulate matter in excess of 30% opacity in violation of Rule 202(b) of Chapter 2 and Section 9(a) of the Act.

Count III alleged that, from April 30, 1977 until September 11, 1978 (including, but not limited to, May 18, 1977 and June 29, 1978), Continental operated its watercraft loading spouts at Elevator B without pollution control equipment capable of particulate removal at the required efficiency in violation of Rule 203(d)(9)(B)(iv)(c)(2) of Chapter 2 ("Watercraft Loading Rule") and Section 9(a) of the Act.

On May 21, 1979, Continental filed a Petition for Variance in PCB 79-111 which requested a variance from the Watercraft Loading Rule until December 31, 1982 for both Elevator B and Elevator C to allow the Respondent time to develop a technically feasible and economically reasonable emission control system.

On May 25, 1979, the Agency filed a Complaint in PCB 79-114. Count I of the Complaint in PCB 79-114 alleged that, from April 30, 1977 until May 25, 1979 (excluding the time period from September 1, 1977 until June 11, 1978), Continental and the Chicago Regional Port District ("Port") improperly operated Elevator C (which is owned by the Port and operated by Continental) by failing to utilize air pollution control equipment at the watercraft loading spouts at Elevator C that has a particulate removal efficiency of not less than 98% by weight prior to release into the atmosphere in violation of the Watercraft Loading Rule and Section 9(a) of the Act.

Count II of enforcement action PCB 79-114 alleged that, from April 30, 1977 until May 25, 1979 (excluding the period of September 1, 1977 to June 11, 1978), Continental and Port allowed the operation of Elevator C's watercraft loading spouts without the requisite Operating Permit from the Agency in violation of Rule 103(b)(2) of Chapter 2 and Section 9(b) of the Act.

After these 3 cases were consolidated and various preliminary legal matters were disposed of, hearings were held on September 15, 1982 and January 25, 1983. The parties filed a Stipulation and Proposal for Settlement on January 25, 1983 which purports to settle all three actions herein. Such a settlement agreement is proper in an enforcement action pursuant to Section 103.180 of the Board's Procedural Rules. However, the Board has previously stated that it does not favor the use of a settlement agreement with respect to a variance proceeding. For the purposes of the variance petition in PCB 79-111, the Board shall therefore construe the proposed settlement agreement as merely an agreement as to the facts of the case.

Continental operates 2 large grain elevators (i.e., Elevators B and C) in Chicago, Cook County, Illinois which handle corn, wheat and soybeans.

Elevator B, which loads approximately 21 million bushels of grain per year through 5 loading spouts, is owned and operated by Continental and located at 11700 S. Torrence Avenue in Chicago. This elevator, which was built in 1954 and purchased by Continental in 1962, has a present replacement cost of about \$16 million dollars. The 5 watercraft loading spouts of Elevator B have a total replacement cost of \$500,000. Elevator B usually operates with a work force of up to 50 people on one shift, 5 days per week. (Stip. 2).

Elevator C, which loads about 10 million bushels of grain per year through 7 loading spouts, is owned by the Chicago Regional Port District and operated by Continental at 12700 Lake Calumet Harbor Drive in Chicago. This elevator, which was built in 1957, has a current replacement cost of approximately \$13 million dollars. The 7 loading spouts, which were constructed in 1958, have a total replacement cost of about \$700,000. Elevator C normally operates with a work force of up to 40 people on one shift, 5 days per week. (Stip. 2-3).

Because the grain storage business is seasonal in nature, the grain handling activities at each elevator are subject to seasonal fluctuations. The peak receiving and shipping periods for grain naturally follow the period of time that the grain is harvested and sold by farmers. The parties have indicated that "this peak begins to build in September and lasts into December when shipping closes down on the Great Lakes due to ice build-up and the closing of the St. Lawrence Seaway". (Stip. 2). No watercraft are loaded from that time until the beginning of the next shipping season.

After harvested grain from Illinois and nearby states is delivered via truck, train, and watercraft to Continental's grain elevators, the grain is stored in Elevators B and C until it is subsequently sold and transported to market. Inside the grain elevators, the grain is: (1) moved about by conveyor belt, screw elevator, or bucket elevator; (2) lifted, weighed, and dumped into a conveyor belt which carries the grain to loading spouts; and (3) allowed to flow by gravity through the loading spouts into the hulls of various watercraft. (Stip. 3-4).

These specially designed waterspouts are telescoping steel sleeves which are supported by steel cables attached to winches which are mounted on the sides of the elevators. The mechanical system of cables and winches allows each loading spout to be moved about so that grain can flow into all areas of the watercraft's hull (thereby assuring the proper and safe loading of the grain into various types of ships and barges). (Stip. 3-4).

To capture dust that is contained in the grain, suction is applied to most transfer points. However, some emissions of grain dust nevertheless occur at the point where: (1) grain is dumped from storage bins to the conveyor belt; (2) grain is conveyed into the loading spout during the loading of ships and barges; and (3) "the grain stream impinges on the bottom of the ship or mound of grain under the loading spout" (or within the grain stream itself). (Stip. 4).

Although Continental had a grain dust collection hood at the entry point to the loading spout connected to ductwork leading to a fabric filter baghouse, it did not have a grain dust capture system at the exit point of the shipping spout for the watercraft loading operations. (Ex. C).

Accordingly, Continental continuously evaluated a number of pilot model grain dust capture systems in an attempt to find a technically feasible and economically reasonable solution to dust emission problems at the spout's discharge point. However, the pilot model systems that were initially studied proved inadequate and usually encountered grain plugging.

Initially, the most potentially promising dust collection system was a choke feed control apparatus for inclined loading spouts which was developed by the Buhler-Miag Company and extensively investigated and tested by Continental during 1979. However, the installation of pilot systems and prototype testing indicated that the estimated cost of installing the efficient Buhler-Miag spouts (which would be in excess of \$1,250,000 at Elevator B alone), when combined with a weight problem which would necessitate expensive structural modifications to existing loading spouts, severely limited the new system's practicality and potential applicability to Continental's operations. (Stip. 7-9).

Further research and testing led Continental (in conjunction with Van's Industrial of Chicago) to develop an entirely new, lightweight loading spout which inhibits the release of grain dust into the atmosphere. The Agency agrees that this newly-developed spout, known as the Alum-a-Lite Dust Suppressor, "effectively meets the requirements of the Watercraft Loading Rule when used with aspiration at the top of the spout". (Stip. 11).

Because the parties are in fundamental agreement as to the merits of this newly developed dust suppressor spout, they have requested that the Board enter an Order which includes a formal determination that the spout has the requisite efficiency to comply with the Watercraft Loading Rule. (R. 14).

The Board declines to give an engineering opinion on the ability of these suppressors to function for the purpose intended. Nevertheless, the Board recognizes the time, effort, and money that Continental has spent in developing a grain dust capture system, and will approve the parties' compliance plan based on the representation of the parties that the necessary Board rules and regulations will be complied with.

The proposed settlement agreement provides that Continental and the Port shall: (1) expeditiously install, according to a specified compliance schedule, the Alum-a-Lite (or its equivalent) Dust Suppressor at Elevator B and C at an approximate cost of \$50,000 for Elevator B and \$70,000 for Elevator C in order to comply with the Watercraft Loading Rule and (2) properly maintain and operate the dust suppressors according to specifically developed and delineated procedures during watercraft loading. (Stip. 10-16). The Agency has agreed that (1) the Alum-a-Lite Dust Suppressor Spout "effectively meets the requirements of the Watercraft Loading Rule when used with aspiration at the top of the spout"; (2) its Variance Recommendation filed on July 27, 1979 in PCB 79-111 (which recommended denial of Continental's requested variance) be appropriately modified to constitute a recommendation "that Continental should be granted a variance from the Watercraft Loading Rule for its operation of Elevators B and C" and that "this variance should be granted for a five (5) year period, starting with the effective date of the Watercraft Loading Rule, April 30, 1977, and extending until April 30, 1982"; and (3) due to Continental's diligent efforts to achieve compliance via the development of new control technology, no penalty is warranted. (Stip. 12-14).

Construction permits for the special dust suppressors for Elevators B and C were applied for on July 15, 1980; issued by the Agency on August 4, 1980; and construction was successfully completed in June of 1981 after settlement of "an eight month labor dispute which prevented access of tradesmen to complete construction". (Stip. 12; Ex. A and B). On May 14, 1982, Continental applied for an operating permit for Elevator B which was issued on May 19, 1982 and subsequently reapplied for an operating permit on September 2, 1982 which was issued by the Agency on September 29, 1983. On March 11, 1982, Continental applied for an operating permit for Elevator C and the Agency issued this operating permit on April 7, 1982. (R. 31).

At the hearing of January 25, 1983, Mr. Seymour Levine, the Regional Manager of the Field Operations Section of the Agency's Division of Air Pollution Control in Region 1, testified that emission levels from the grain elevators were substantially reduced after the installation of the special dust suppressors and were "relatively small" when compared with the emissions of particulate matter from three steel mills in the immediate vicinity. (R. 46-47; R. 62). On February 17, 1983, Continental filed a Supplemental Statement which requested that the Board disregard Mr. Levine's testimony pertaining to the Agency's utilization of the AP-42 air pollutant emission factors with respect to watercraft loading.

Additionally, the written testimony of Mr. James A. Crombie, Continental's Midwest Regional Operation Manager (who was on medical leave), was incorporated into the hearing record pursuant to the Board's Procedural Rule 321 (and the Agency's waiver of that portion of the rule which required Crombie's physical presence for cross-examination). (R. 64; R. 69-72). Mr. Crombie, who was primarily responsible for the efforts of Continental to control dust emissions from Elevators B and C, explained why it was technically infeasible and economically unreasonable for Continental to comply with the Watercraft Loading Rule until its breakthrough in technology (i.e., the development of the Alum-a-Lite dust suppressors). (R. 76). Moreover, Mr. Crombie indicated that, although "the standard practice in the grain industry is to add dust back into the grain", Continental has helped minimize particulate emission by not adding "this grain dust back into the grain stream prior to loading watercraft". (R. 77-78).

In evaluating these consolidated enforcement actions and the proposed settlement agreement, 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. Emissions generated during watercraft loading appear to have a negligible impact on ambient air quality. Moreover, the two grain elevators do not load watercraft on a continuous basis, but instead conduct loading operations on an intermittent, infrequent schedule only during daylight hours during the shipping season. The social and economic value of these elevators (which have a combined replacement cost in excess of \$30 million dollars) is significant. Additionally, the new emission control device developed after efforts to achieve the requisite compliance appears to the parties to be a technically practical and economically reasonable solution to prior environmental problems. Accordingly, the Board finds the settlement agreement acceptable under Procedural Rule 331 and Section 33(c) of the Act.

The Board finds that Continental Grain Company and the Chicago Regional Port District violated Rule 103(b)(2) of Chapter 2; the Watercraft Loading Rule, and Sections 9(a) and 9(b) of the Act at Elevator C. Continental, at Elevator B, violated Rule 103(b)(2) of Chapter 2; Rule 202(b) of Chapter 2; the Watercraft Loading Rule; and Sections 9(a) and 9(b) of the Act. The Respondents will be granted a variance from the Watercraft Loading Rule for Elevators B and C from April 30, 1977 until April 30, 1982 and will be ordered to follow the specified compliance plan and schedule delineated in the settlement agreement. No penalty shall be assessed against either Respondent.

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

ORDER

It is the Order of the Illinois Pollution Control Board that:

1. Respondents Continental Grain Company and the Chicago Regional Port District violated Rule 103(b)(2) and Rule 203(d)(9)(B)(iv)(c)(2) of Chapter 2: Air Pollution Control Regulations and Section 9(a) and Section 9(b) of the Illinois Environmental Protection Act at Elevator C.

2. Respondent Continental Grain Company, at Elevator B, violated Rule 103(b)(2); Rule 202(b); and Rule 203(d)(9)(B)(iv)(c)(2) of Chapter 2 and Section 9(a) and 9(b) of the Act.

3. The Respondents shall comply with all the terms and conditions of the Stipulation and Proposal for Settlement filed on January 25, 1983, which is incorporated by reference as if fully set forth herein.

4. Respondents Continental Grain Company and the Chicago Regional Port District are granted a Variance from the Watercraft Loading Rule (Rule 203(d)(9)(B)(iv)(c)(2) of Chapter 2: Air Pollution Control Regulations) from April 30, 1977 until April 30, 1982 subject to the conditions that the requisite dust suppressors shall be appropriately installed, maintained, and operated on Elevators B and C in accordance with all applicable permit conditons and all agreed-upon conditions delineated in the Stipulation of January 25, 1983, which is incorporated by reference as if fully set forth herein.

5. Within 45 days of the date of this Order, Continental Grain Company and the Chicago Regional Port District shall execute and forward to the Illinois Environmental Protection Agency, 2200 Churchill Road, Springfield, Illinois 62706, a Certificate of Acceptance and Agreement to be bound to all terms and conditions of this Order. This forty-five day period shall be held in abeyance for any period this matter is being appealed. The form of the certificate shall be as follows:

CERTIFICATE

I, (We), _____, having read the Order of the Illinois Pollution Control Board in PCB 78-247, PCB 79-111, and PCB 79-114 Consolidated, dated _____ understand and accept the said Order, realizing that such acceptance renders all terms and conditions thereto binding and enforceable.

Continental Grain Company

Chicago Regional Port District

By: Authorized Agent

By: Authorized Agent

Title


Title

Date

Date

IT IS SO ORDERED.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 27th day of February, 1983 by a vote of 0.



Christan L. Moffett, Clerk
Illinois Pollution Control Board