BEFORE THE POLLUTION CONTROL BOARD
OF THE STATE OF ILLINOIS
April 28, 1971

STANDARD BRANDS, INCORPORATED	)	
	)	
	)	#71-3
v.	)	
	)	
ENVIRONMENTAL PROTECTION AGENCY	)	

OPINION OF THE BOARD (BY MR. LAWTON):

Standard Brands, Incorporated, Petitioner herein, a national conglomerate with gross annual sales in excess of One Billion Dollars operates a grain-processing plant in Pekin, Illinois. It seeks a variance of the Rules and Regulations governing the control of air pollution until September 1, 1972, in order to replace its present coal-fired boilers with gas and oil-fired boilers, pursuant to a time schedule previously set forth in an Air Contaminant Emission Reduction Program (Acerp) (Pet. Ex.1-T, U., V) approved by the Air Pollution Control Board on July 31, 1969 (Pet. Ex. 1-S). The present operation causes emissions in excess of those prescribed in Rules 2-2.11, 2-2.12 and 3-3.112 of the Rules and Regulations governing the control of air pollution issued by the Illinois Air Pollution Control Board remaining in force and effect pursuant to Section 49(c) of the Environmental Protection Act. Specifically, Petitioner's emissions are at a computed rate of 1.48 pounds of particulates per million BTU input, compared with an allowable limit of .6 pounds of particulates per million BTU input. The emissions subject to the original Acerp and this variance request relate solely to the fuel burning operation. Emissions from food processing operations do not appear to exceed the allowable limits. Odors emanating from Petitioner's sewage disposal facility, while not the subject of the variance request, present a serious problem and will be considered below. Hearing was held on the petition in Pekin on March 16, 1971.

We grant the variance until April 27, 1972 subject to the terms and conditions set forth in the decretal portion of this Opinion. In doing so, we take note of the inordinate amount of time consumed by petitioner in arriving at a definitive program of air pollution control. We also require that Petitioner cease polluting the air as a consequence of other elements of its operation not the subject matter of this variance request. All of these matters will be considered in more detail below.

As noted above, Standard Brands, Incorporated, is a nationwide corporation with world-wide sales grossing 1.2 billion dollars per year and net annual profit of 37 Million Dollars. The Pekin plant is one of many Standard Brand facilities in the United States. The Pekin complex is located in the unincorporated portion of Tazewell County, approximately 1/4 mile south of the Pekin city limits on the east bank of the Illinois River. In the general area of petitioner's operation are a Commonwealth Edison Power Plant and The Quaker Oats and American Distilling Company facilities. Residences are located approximately 1/2 mile to the southeast. The Standard Brands plant manufactures yeast, malt and grain extracts for use in the baking industry by the processing of molasses, corn and malt sprouts. So far as appears from the record, the food processing operations in themselves do not constitute a significant source of air pollution. Petitioner's difficulty has arisen from the use of coal-fired boilers and from the operation of its sewage treatment plant.

230 persons are employed by petitioner, with an annual payroll of 2.2 million dollars.

A review of the events and circumstances leading up to the present variance request is in order.

On July 14, 1967, Petitioner sent to the Illinois Air Pollution Control Board a Letter of Intent, together with supporting documentation as required by the Regulations of the Board (Pet. Ex. 1-TTT through Ex. 1-TTTT). In addition to the grain processing operations the letter specified the use of three 612 horse power boilers built in 1926 and one 708 horse power boiler built in 1936; all boilers were coal-fired with chain grate stokers. The report stated that a test of emissions would be conducted to determine what steps would be necessary to bring the operation into compliance. Subsequent computation confirmed that the operation of these boilers constituted a violation of the relevant air pollution control regulations. The report also noted the use of an anaerobic sewage treatment plant utilizing an after-burner to ignite the methane gas produced by digestion and the use of "ozene" as an odor-reducing agent for the sludge lagoons. The report indicated that in excess of 51,000 tons of coal were burned annually at the plant. The Letter of Intent stated that an Acerp would be filed before April 15, 1968 (Pet. Ex. 1-YYY).

On April 18, 1968, Petitioner wrote to the Air Pollution Control Board (APCB) stating that a report on progress being made toward compliance with the APCB regulations would be forwarded as soon as completed. On May 27, 1968, a further letter (Ex. 1-PPP) was sent to the APCB describing the nature and operation of the four coal-fired boilers and concluding that it was not possible to improve their operations to meet existing emission standards, although certain improvements were contemplated that would lessen the extent of the violation. Specifically, an over-fire air system was under consideration which would utilize high velocity air jets which would increase combustion and lessen particulate emissions. The letter again referred to site testing to ascertain what would be necessary to bring the

operation into compliance. The letter stated that "in the near future", Petitioner would have sufficient information on which to base a decision as to whether the necessary testing could be done by Petitioner or by an outside consulting staff. On July 23, 1968, a telegram was sent to the APCB requesting extension to November 1, 1968 for the filing of an Acerp. A letter of the same date confirmed this request. (Ex. 1-OOO, 1-NNN.) On July 19, 1968, the Technical Secretary of the APCB wrote Petitioner stating that he would recommend to the Board that no further extension of time be granted for the filing of an Acerp. (1-MMM). On July 31, 1968, the Technical Secretary advised Petitioner that the request for extension to November 1, 1968 had been granted. (1-LLL).

On September 3, 1968, Petitioner wrote the APCB indicating that testing was contemplated in the near future and that installation of over-fire air blowers was being made in the coal-fired boilers that would reduce particulate emissions. (Ex. 1-JJJ). On October 1, 1968, Petitioner advised the APCB that boiler-testing had taken place and submitted a progress report for completion of the over-fire air facilities on the four boilers (1-GGG). However, Petitioner indicated that because of the time involved in completion of this program, full evaluation could not be made until 1969, and accordingly, Petitioner could not submit its Acerp in compliance with the November 30, 1968 deadline. The letter requested a further extension to November, 1969, indicating for the first time that consideration was being given to the gas-oil fired boilers and that the availability of alternative fuels was being investigated. This request was held in abeyance by the APCB, pending receipt of further information. (Pet. Ex. 1-FFF).

A further letter was written on January 7, 1969 stating that contact had been made with Central Illinois Light Company (Cilco) with the view of determining the possibility of purchasing additional power which would enable reduction of Petitioner's own power generation. On February 5, 1969, a similar letter was written to the APCB adding that discussions were being held with Cilco to determine the availability of natural gas to enable conversion of Petitioner's boilers (Ex. 1-GG). On March 12, 1969, Petitioner wrote to the APCB requesting an extension to July 1, 1969 for submission of the Acerp and detailing the improvements made by the over-fire air facilities. The letter reiterated Petitioner's "studies" to determine whether Cilco could supply gas enabling elimination of the coal burning boilers. The letter stated that the utility did not presently have sufficient gas available in the area to satisfy Petitioner's anticipated requirements, assuming the installation of gas-fired boilers. ((1-EE).

On April 4, 1969, the Technical Secretary rejected the March 12, 1969 letter as a proposed Acerp asserting that no definite method for controls of the various emissions nor date for implementing controls

had been received (Ex. 1-DD). On April 21, 1969, Petitioner wrote the APCB stating that it would install gas-fired boilers or replace its present coal-fired boilers with new coal-fired boilers with electrostatic precipitators and that the installation would be completed by September of 1973. The Technical Secretary acknowledged this proposal as an Acerp and indicated that it was being recommended for approval to the APCB. However, at its next meeting, action was deferred pending clarification of certain points, apparently based on statements made to the APCB by Cilco relative to gas availability. On May 29, 1969, action was again deferred pending a definitive decision by Petitioner as to whether it would install gas-fired boilers or install control equipment in its present coal-fired boilers.

On July 24, 1969, Petitioner submitted a proposal that would entail the elimination of existing coal-fired boilers and the substitution of gas-oil fired boilers of alternatively, new coal-fired units, either of which would meet the emission standards. No commitment on gas availability had been received from Cilco. An installation schedule was appended (Pet. Ex. 1-V) providing for complete installation and operation of the new units by September of 1972. The program called for construction of a new building to house the boilers, removal and relocation of existing water tanks, roadway relocation, new stack design and installation, and demolition of existing boilers. (Pet. Ex. 1-T). On July 31, 1969, the Acerp was approved by the APCB subject to periodic reporting on progress toward completion of the program.

A report was submitted on December 30, 1969 indicating the receipt of cost data on the alternative installations but stating that the availability of gas had not been determined. A further report was submitted on June 25, 1970, which stated that the replacement of existing coal-fired boilers with gas-oil fired units would be recommended to the management. This suggestion was premised on the anticipated sulphur dioxide and particulate problems resulting from the unavailability of low sulphur coal (Ex. 1-P).

On December 4, 1970, a report was submitted to the Environmental Protection Agency (EPA)which included a boiler emission reduction program again contemplating completion by September, 1972. This report proposed installation of three gas-oil fired boilers with 80,000 pounds per hour steam generated capacity. The report noted the elimination of self-generated AC electric power resulting in a 10% reduction of particulate emissions. On December 16, 1970, the EPA advised Petitioner that as a consequence of the enactment of the Environmental Protection Act and the expiration of one year since the approval of the original Acerp, a new request for variance should be filed.

Standard Brands' petition for variance was received by the Pollution Control Board on January 18, 1971, incorporating by reference the previously submitted boiler reduction program. The petition asked for the right to continue with its present emissions pending compliance with the original Acerp Program, providing for installation of new gas-oil fired boilers by September, 1972, at which time Petitioner would be in compliance with the relevant regulations. The Petitioner notes the factual matters previously set forth in this Opinion including the emission rate of 1.48 pounds of particulates per million BTU input, as opposed to the allowable limit of .6 pounds per million BTU input, as prescribed by Rules 2-2.11, 2-2.12 and 3-3.112 of the Rules and Regulations Governing the Control of Air Pollution. The Petitioner, in graphical form, sets out the project schedule to September, 1972, originally appended to the July 24, 1969 Acerp, as approved. Boiler fabrication has presumably started, steel erection and preliminary piping will start in June and July of this year, boiler setting will take place in December and final piping, instrumentation and shakedown would consume the first eight months of 1972 with start-up in September of 1972.

Section VI attached to the variance request emphasizes the need for steam in the heating and process operation of Petitioner's manufacturing facilities and that the failure to obtain a variance as requested would necessitate a shut-down of the plant resulting in the unemployment of 230 employees, the loss of a 2.2 million dollar payroll and the unavailability of yeast and diamalt necessary for the baking industry.

Pursuant to the statute, the Environmental Protection Agency filed its recommendation, recommending that the Petition be denied and that Petitioner be "enjoined" to mask or eliminate all odors emanating from the plant by April 16, 1971, convert all coal-fired boilers to gas-fired boilers no later than March 16, 1972, limit its coal purchases to 1.4 sulphur coal and keep its SO_2 emissions at not more than 2.5 pounds per million BTU, and that Petitioner not be allowed to shut down its operation and thereby subvert and evade the Environmental Protection Act. A $200,000 bond to assure compliance with the timetables set forth in the recommendation was proposed. The recommendation notes the receipt of 37 communications from persons residing in the vicinity of the plant all opposing the granting of the variance.

From the testimony of the witnesses introduced by the Agency and from the multiplicity of letters received, it is evident that the operation of Petitioner's plant constitutes a major source of nuisance to the people of the community. Dramatically illustrative of the impact of Petitioner's coal-burning operation on the community is the testimony of Don Cranwill who operates an A&W drive-in stand within 300 yards of the Standard Brands plant. He testified that the particulate emissions from the plant were one-quarter inch deep on his stand (R.151). Ray Riek testified that stack emissions from the plant were "all full of

little chunks of coal, anything from the size of a pinhead to, Oh, I'd say, one half the size of a matchhead...if they hit your glasses they'll bounce in your eye...if you go out there bareheaded, your coming in like this, you're lousy." (R.143). Mr. Riek also testified that on one occasion stack emissions were "so heavy that within one hour the top of my van at the little gutters on the side had filled to the gills... the smoke from the stack was coming directly over." (R.185). Other testimony supported the conclusion that particulate emissions from the plant were pervasive in the neighborhood, preventing outdoor activities, the hanging of wash. The continual presence of fly ash, and black smoke was manifest.

Although not the subject of the variance petition, testimony of witnesses disclosed that odors emanating from Petitioner's sewage disposal plant constitute a severe burden on the adjacent area. Specifically, the gaseous emissions from the anaerobic digestion occurring in Petitioner's sewage disposal plant are not adequately burned off and result in a severe odor problem in the vicinity of Petitioner's plant. Previously, the plant had used effluent lagoons which in themselves were a major source of odor. Replacement by anaerobic digesters constituted a desirable substitute as long as they operated properly. The anaerobic treatment generates methane gas which is burned off by a gas burner (R.176 through 178). However, it appears that on occasions when sewage digestion and resulting methane gas generation were diminished. or when strong winds blow, the flame igniting the methane gas blows out causing the unburned emissions of methane gas to permeate the neighborhood. Some efforts at shielding, improved burning and automatic re-lighting have been under consideration to preclude the blow-out, but it does not appear that Petitioner has aggressively addressed itself to this problem. The flame continues to be blown out, particularly on week-ends, when the digestion and gas generation are at a minimum, at the same time when most people are home and become the unwilling victims of this condition. Again, the testimony of Don Cranwill, the A&W operator is illuminating. According to him, the customers in his establishment are obliged to cancel their orders when the flame blows out. Asked if this hurt his business, he answered, (R.150) "Did you ever try doing business in a cesspool?" Witness Riek stated that the odors "remind you of an outdoor toilet in a hogpen." (R.138). While the juxtaposition of these uses intrigues the imagination, and might conceivably produce a synergistic effect, either alone would be sufficient to convey the impact of Petitioner's operation. According to the witness, this condition has maintained for six to eight years (R.142). There is no question that the odors emanating from the sewage plant operation by a combination of the digester gas emission and flame-out, have created a substantial and inexcusable burden on the community and must be abated as a condition to any variance allowance.

The Environmental Protection Agency challenges the time schedule proposed by Petitioner for installation of the new equipment. It contends that a substantial amount of the work proposed to be done subsequent to the initial 54 week period for boiler construction, which work is primarily the installation of piping and electrical equipment could be done simultaneously with the other phases of construction and installation and accordingly, what is proposed as a total 81 week job could be reduced to 55 weeks. (See testimony of Reddy, R.109). This contention is challenged by Petitioner. (See testimony of Valkert. R.159). According to this witness, the proposed time schedule and sequence of events are necessary and reasonable. Any departure would be impracticable. In his words, it is necessary to proceed on a "step-by-step system in order to accomplish the finished product". (R.159). Specifically, the boilers must be in place before the structures in which they are housed are erected. Likewise, the piping and electrical installation could only be made after the boilers are located. He states (R.160)

> "If you have ever been in a boiler plant and taken a look at the complexity of the piping, you will understand what I mean. That you just can't prefabricate all this stuff and then expect to slip an eighty-ton monster in between this...There will be three of these boilers and there will be some time in between in order to set these on their foundation. This sequence here indicates that we install our boilers and then we proceed to install the rest of the structural steel in the building. We put the roof on it and we put some siding up and then, only then can you proceed to hang up your piping. You've got to have steel to hang your mains up...But the particular piping around the boilers has to be done when the boilers are up. I can't pipe a boiler without a boiler being there." (R.162).

Piping includes steam piping, water piping and blow-down piping. The complexity of the required electrical installations was adequately described (R.163-167) to again indicate that the time and sequence proposed by Petitioner are not unreasonable. While some time-saving may be effected, the Board is not pursuaded that a major re-programming is indicated as suggested by the EPA witness.

Likewise, the Agency's insistence on the utilization of low-sulphur coal and the curtailment of sulphur dioxide emissions as conditions to the variance allowance, does not find adequate support in the record. The 3% sulphur content in Illinois coal being utilized by Petitioner undoubtedly has fly ash and sulphur dioxide characteristics that a lower sulphur coal would not possess. However, the availability of such coal for Petitioner's operation and the SO_2 impact from the use of its present coal are not adequately demonstrated in the record to enable us to direct Petitioner to limit its burning to 1.4 sulphur content coal as proposed by the Agency. This is not to say that such a provision might not be a proper condition to a variance in a proper case notwithstanding the absence of a sulphur regulation. However, this is not the

case nor the record to insist on such condition. In time, we undoubtedly will issue both sulphur and SO_2 regulations which will require Petitioner's compliance. Until such regulations are promulgated, however, we will not require such limitation in the absence of demonstrated adverse consequences.

In granting this variation, we do not concede that Petitioner has acted with the speed and determination we would have preferred to see. Indeed, if it had acted in a determined manner at the outset, and if the former Air Pollution Control Board had shown the same sense of urgency now being demonstrated by the Agency, it is likely the coal-fired boilers would have already been replaced. However, the approval of the previous Acerp has sanctioned the delay and Petitioner is now seeking to adhere to its previously approved program. Were this an original proceeding before us, our attitude might well be very different, particularly in view of the demonstrated burdens being placed upon the community by Petitioner's operation.

The law prohibits the granting of a variance in excess of one year. (Environmental Protection Act, Sec. 36(b)). However, we can approve Petitioner's proposed 81-week schedule and grant the variance for a one-year period before the expiration of which Petitioner must come back to the Board with a status report indicating the state of the installation and a time schedule and program for what remains to be done. If a proper showing is made, the variance may be extended to accommodate the time needed for completion. Periodic reports should be made in the interim, particularly on the availability of natural gas. At the present time, it appears that non-interruptible gas is not available but that interruptible gas is, thereby enabling the replacement of the coal-fired boilers on a gas-oil fuel basis (See Hearing Officer's Ex. 1, Letter dated March 10, 1971 from Standard Brands Incorporated to Hearing Officer.) The record supports Petitioner's allegations that denial of the variance as proposed would constitute a hardship on Petitioner disproportionate with the harm imposed on the community by its continued operation. Insistence on immediate cessation of coal-burning would require shutting of the plant with the unemployment of 220 workers, and resulting loss of payroll. Insistence on installation of abatement equipment would constitute an unreasonable expenditure at a time when Petitioner is in the process of making a complete substitution of its boilers with those that will meet emission limits and pursuant to a previously approved Acerp presently in the process of implementation, and it is likely that it would take nearly as long to install control equipment as to replace the boilers. If the company takes the steps required by the following paragraph to control odors from its sewage digester, we think the continued nuisance will not be serious enough to justify these hardships.

However, we cannot continue to be patient with the inexcusable indifference Petitioner has shown in the proper functioning of its sewage digester and its failure to abate the gaseous emissions emanating therefrom. This sloppy operation has constituted a burden on the community, equal to the coal burning for which Petitioner seeks this variance. We will keep this proceeding open and direct Petitioner to submit within 30 days an abatement program relative to its sewage treatment plant, and the elimination of all odors created by it. This plan must be implemented within sixty days from this date so that the obnoxious emissions from the digester will cease. Petitioner shall file a bond to be forfeited to the State if the odorous conditions persist beyond that date. We have previously imposed conditions for a variance beyond the scope of the subject matter of the variance request. (See Greenlee Foundries, Inc. v. EPA, #70-33, dated March 17, 1971). If the odors were to continue, we should be obliged to reconsider whether the burdens of Petitioner's operations on the community are so great as to require a denial of the variance. Neighbors in the vicinity of Petitioner's plant should not be compelled to apologize to their guests, to see their customers leave holding their noses or feel that they are living within odor range of an industrial privy. If it becomes necessary to have personnel at the sewage plant on a 24-hour, 7 day a week basis to preclude flame-out, this should be done.

This opinion constitutes the finding of fact and conclusions of law of the Pollution Control Board.

ORDER

The Pollution Control Board, having considered the petition, recommendation, transcript of testimony and all exhibits filed in this proceeding, hereby grants unto Standard Brands, Incorporated, a variance permitting said corporation to operate its coal-fired boilers in a manner whereby emissions therefrom exceed the limits set forth in Rules and Regulations governing the Control of Air Pollution, until April 27, 1972, subject to the following terms and conditions:

1. Petitioner shall pursue with diligence its program of replacement of its present coal-fired boilers with gas-oil fired boilers as set forth and approved in the original Air Contaminant Emission Reduction Program dated July 24, 1969, approved by the Air Pollution Control Board on July 31, 1969 and restated in its present petition for variance. Petitioner shall make reports every two months to the Board and to the Agency of its progress in implementation of its program, the first of such report to be made no later than June 28, 1971. During the period that this variance is in effect, Standard Brands, Incorporated, shall not increase the pollutional nature of its emissions, either in strength or in volume.

2. Prior to January 27, 1972, Petitioner shall petition the Board for an extension of this variance to enable such additional time not extending beyond September 1, 1972 in which to complete its installation aforesaid, and demonstrate that it has made satisfactory progress toward completion of its program.

3. Petitioner shall post with the Environmental Protection Agency on or before May 15, 1971, a personal bond or other adequate security in such form as the Agency may find satisfactory in the amount of $150,000,00, which sum shall be forfeited to the State of Illinois in the event Petitioner's plant is operated after September 1, 1972 in violation of the relevant statutory and regulatory provisions relative to the control of air pollution. The conditions of this bond shall survive the termination of this variance.

4. Petitioner shall submit to the Board and to the Agency within 30 days from the date hereof a plan and program for abatement of odorous emissions from its sewage plant which said plan shall provide for complete abatement of such odors not later than 60 days from this date. Petitioner shall submit a bond or other security in the form set forth in Paragraph 3 above in the amount of $50,000 to be forfeited upon failure to comply with the terms and conditions of this paragraph.

5. The failure of Petitioner to adhere to any of the conditions of this Order shall be grounds for revocation of this variance.

I, Regina E. Ryan, do hereby certify that the above Opinion and Order was adopted by the Board on the 28th day of April, 1971.

REGINA E. RYAN
Clerk of the Board