

ILLINOIS POLLUTION CONTROL BOARD
July 25, 1974

CITY OF HIGHLAND)
)
)
 v.) PCB 73-288
)
 ENVIRONMENTAL PROTECTION AGENCY)

MR. JOHN GEISMANN, CITY ATTORNEY, appeared on behalf of the
City of Highland
MR. DELBERT HASCHEMEYER, ASSISTANT ATTORNEY GENERAL, appeared
on behalf of the Environmental Protection Agency

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

The City of Highland (Highland) filed a Variance Petition seeking relief from Rules 203(g)(1)(B) and 204(c)(1)(A) of Chapter 2 of the Pollution Control Board's Rules and Regulations (Air Regulations) on June 22, 1973. On July 19, 1973 the Board declared Highland's Variance Petition to be insufficient to meet procedural requirements. On August 10, 1973 Highland filed an Amended Variance Petition seeking the same relief. The Agency filed a Recommendation to deny the Variance Petition on October 24, 1973. The Agency correctly alleged that Rules 203 and 204 do not become effective until May, 1975, therefore, Petitioner must be seeking relief from Rule 103(b) and Rule 104 of the Air Regulations and Rule 3-3.112 of the Rules and Regulations Governing the Control of Air Pollution (Air Rules). Three days of hearing were held on October 26, 29, and November 19, 1973. A waiver of the statutory 90-day decision period was filed on January 31, 1974. On February 19, 1974, Highland filed an Amended Variance Petition seeking relief from Rules 103(b)(2) and 104 of the Air Regulations, Rule 3-3.112 of the Air Rules, and Section 9(a) of the Act. Highland's attorney of record orally waived the 90-day decision period until July 11, 1974. Pursuant to Procedural Rule 408, Highland's filing of an Amended Variance Petition also waived the 90-day decision period until July 11, 1974 by starting the running of the time period again.

Highland operates a municipal electric power generating station located in the City of Highland, Madison County, Illinois. The station has a total generating capacity of 25,430 kw. Diesel fuel and gas-fired turbine generators provide 12,930 kw. Three coal-fired boilers, which are the subject of the Amended Variance Petition, provide 12,500 kw. These three coal-fired boilers have been the subject of prior Board Orders. Highland's Air Contaminant Emission Reduction Program (ACERP), approved by the Air Pollution Control Board, required replacement of the coal-fired boilers with gas-oil units by July 1, 1971. Pursuant to a Variance Petition, the Pollution Control Board granted Highland a variance until July 1, 1972 in order to replace the three coal-fired boilers with gas-oil fired boilers (City of Highland v. EPA, PCB 71-284, 3-250, (December 9, 1971)). The Board finds initially that Highland has not carried out nor sought a variance from this previous Order in PCB 71-284.

Highland applied for an Operating Permit on January 27, 1973. On April 17, 1973 the Agency denied an Operating Permit for the three boilers because Highland failed to offer a compliance plan or project completion schedule which would show compliance with all applicable Rules and Regulations.

Highland's power generating station is the sole source of power serving the City of Highland. The summer peak demands for 1972, 1973, and 1974 are estimated to be 13,000, 14,000, and 16,500 kw. respectively (R. 252 and page 6 of Amended Variance Petition). Because Highland is not interconnected with any other power system, it is therefore necessary to utilize the coal-fired system to supplement the diesel fuel and gas-fired turbine generators which can only provide 12,930 kw (page 2 of Agency Recommendation).

Highland, together with eleven other Illinois municipalities are presently seeking an interconnection with Illinois Power Company and other members of the Illinois-Missouri Power pool. This request was filed in December of 1969 before the Federal Power Commission. Highland alleges that to require compliance with the Air Regulations would be arbitrary and unreasonable because once the interconnection agreement is entered into, Highland will be in compliance by 1975 (Page 1, Amended Variance Petition), by using the three coal-fired boilers for standby purposes or using other fuels to meet emissions requirements (Page 2, Amended Variance Petition). If Highland is not granted an interconnection order by the Federal Power Commission, Highland proposes to file a Compliance Schedule showing compliance with applicable Board Rules and Regulations.

The Board has decided to deny Highland's Variance request for the following reasons. The City of Highland has violated the previous Board Order to replace its coal-fired generating units with gas and diesel units by January 1, 1972 (Order of the Board, PCB 71-284, 3-250). The record is clear that the City

of Highland is continuing to use its coal-fired units (R. 15).

The Board rejects Highland's allegation that once they receive an interconnection order from the Federal Power Commission they will only use the coal-fired boilers for standby power (R. 14, 15). A review of the Brief filed by the twelve municipalities seeking an interconnection agreement shows that the City of Highland did not raise the need for interconnection capacity to comply with environmental criteria, nor was it covered by the proposed interconnection agreement which was proposed by the twelve municipalities (Agency Exhibit 6). Retirement of the coal-fired boilers would be prohibited if the Federal Power Commission grants the relief sought by Highland because Highland has pledged an emergency reserve generating capacity of 25,450 kw (Highland Exhibit A, page 15). Therefore, Highland would have to maintain the three coal-fired boilers on at least a standby basis. The principle benefit to the City of Highland from the interconnection agreement would be the potential for substantial quantities of economy energy to the municipality during the evening and weekend hours and other off-peak times when Illinois Power Company would have surplus energy available (Highland Exhibit A, page 18); and the second benefit is a reduction in the amount of reserve required of Highland to meet its peak (Highland Exhibit A, page 15). Highland is proposing that during the months of June, July, August, and September, they be allowed to use the coal-fired units as base units with the oil and gas as peak units because of the start-up time required of a coal-fired boiler as compared to the short start-up time of the engine (R. 26, 27). If interconnection was accomplished with Illinois Power, 5,000 kw would be available during summer time peak periods (R. 248). Thus in 1974, 11,500 kw would have to be supplied by the City of Highland and this could be supplied by operating the diesel-gas fired units (R. 252). The amount of power available from Illinois Power is controlled by the demand on Illinois Power Company's system. This demand is increasing and once it reduces the excess capacity to 3,000 kw, Illinois Power would have to expand the capacity of this transmission line (R. 251).

The following table presents the emission characteristics for each of the three boilers.

	Boiler Number		
	2	3	4
SO ₂ calculated	264.2 lb/hr	475.52 lb/hr	594.4 lb/hr
SO ₂ allowed after 5/30/75	72 lb/hr	129.6 lb/hr	162.0 lb/hr
Particulate calculated	No test	14.05 lb/hr	31.4 lb/hr
Particulate allowed (lb/M)	14.82 lb/hr	16.5 lb/hr	17.82 lb/hr
Particulate allowed (lb/MM BTU)	.37 lb/MM BTU	.2827 lb/MM BTU	.2333 lb/MM BTU

The stack tests conducted for Highland by Peabody Coal Company is not accepted by the Agency as being fully representative of emissions from the power plant (R. 236). Accepting for the moment these results, Boiler #3 is shown to be in violation of Rule 3-3.112. The tests were not conducted at rated capacity, but were conducted at some point between average firing rate and the maximum firing rate. The Agency calculates Highland's particulate emission rates for each of the boilers to be 2.33 lbs. per million BTU. This would be some four-times the allowable particulate limited of 0.55 lbs. per million BTUs. The test results from Peabody Coal Company show that at the operating levels tested, that Boiler #4 clearly exceeds the 0.55 lbs. per million BTU limit. They did not test Boiler #2. The test results for Boiler #3 indicate compliance. The same test results indicate non-compliance with the May 30, 1975 allowable particulate emission rates.

Mr. Lee S. Busch, an Agency employee, presented the following percentage of the necessary reduction in particulate emission levels based upon both calculated emissions and the lowest Highland test level:

<u>BOILER</u>	<u>CALCULATED</u>	<u>LOWEST TEST</u>
#2	86.2%	No test
#3	91%	25%
#4	93.1%	74%

Thus using either the Agency's calculated emission levels or the lowest emission rate tested, Highland must still reduce its particulate emission levels to comply with Board regulations (R. 238, 239 and 240).

Highland's boilers exhaust through relatively low stacks. Boiler #2 has a 170-foot stack, Boiler #3 has 110-foot stack, and Boiler #4 has a 70-foot stack (Agency Exhibit 10). Citizens concern for the particulate emissions is evidenced by Agency Exhibit 7 which is a petition signed by 10 persons objecting to the "excessive exhaust emissions". This petition was sent to Dr. John Roberts at the Agency. The photographs submitted into evidence by the Agency point out the results of Highland's particulate emissions in excess of standards. They show discoloration of homes and sidewalks (Agency Exhibits 1, 2, 3, 4, and 5). Mr. Taylor testified as to the actual physical conditions indicated by the five photographs which were taken in his presence (R. 98 and 100). Mr. Taylor resides in the immediate vicinity portrayed in the photographs previously referred to as Agency Exhibit 1 through 5 (R. 98).

Mr. E. Taylor testified that he had observed the emissions coming from Highland's power plant on numerous occasions (R. 96). He testified that when the wind blows from the power plant toward his property, that he had to cover his face, cover any wash on the washline, that the emissions would come into his house through open windows and cover the inside of the house, and even with the windows closed that the emissions would enter the house (R. 97). Mr. Taylor identified the emissions, which caused the discolorations indicated by Agency Exhibits 1 through 5, as fly-ash (R. 101). Agency Exhibit 6 is a sample of the fly-ash removed by Mr. Taylor from a three foot section of his guttering which had accumulated over a two month period (R. 101, 102, and 121). Mr. Taylor testified as to the difficulty in breathing caused by a sulfur-like odor which appears when the wind blows the emissions toward his home (R. 104). Mr. Taylor testified that, although he had painted his home three or four years ago, it was necessary to repaint once a month certain portions which become discolored (R. 116).

Mrs. Voss testified that the emissions from Highland's coal units have stained her car and that this required repairing (R. 192). She further testified that her laundry was stained by the emission when she hung it out to dry (R. 193). Mrs. Voss also stated that black smoke from Highland's power plant had on occasion filled her house (R. 194).

Another citizen witness, Mr. Walter Kirsten, who lives approximately 400 feet from Highland's Power Plant, testified about coal-smoke entering the windows of his home and fly-ash settling on his porch floor (R. 200). He further testified that the fly-ash settled on his car and required two washings to remove it and caused small pitting of his automobile paint surface (R. 200).

The citizen testimony presented at the hearing, the Agency calculated emission rates and the Peabody Coal testing clearly indicate that the City of Highland is causing the particulate emission problem which unreasonably interferes with the surrounding citizens right to enjoy their property free from such emissions. Substantial testimony was presented regarding the technical and economic feasibility of the particulate and SO₂ emissions standards which become effective May 30, 1975. The technical and economic feasibility of the Air Pollution Regulation was fully considered prior to adoption by the Board. The Board, in part, denies Petitioner's request because Petitioner has failed to present the Board with a control program other than delay.

The Board has decided to deny Petitioner's Variance request because of the demonstrated interference with the surrounding citizens, Highland's failure to comply with the previous Board Order, Highland's failure to carry out its ACERP program as modified, and Highland's failure to comply with the Interim Board Order of March 14, 1974. The Interim Order required the City of Highland to furnish the Board, within 30 days, information concerning the current status of negotiations between Highland and Illinois Power regarding interconnection, the litigation before the Federal Power Commission seeking an order compelling Illinois Power to interconnect and the situation regarding fuel oil and natural gas deliveries and supplies to the City of Highland.


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

ORDER

The Illinois Pollution Control Board hereby denies the variance request filed by the City of Highland without prejudice.

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 25th day of July, 1974 by a vote of 5-0.



Christan L. Moffett, Clerk
Illinois Pollution Control Board