

ILLINOIS POLLUTION CONTROL BOARD
April 10, 1975

ENVIRONMENTAL PROTECTION AGENCY,)
Complainant,)
)
)
v.) PCB 73-516
)
)
CITY OF PERU, A Municipal Corporation,) Respondent.

Mr. Marvin N. Benn and Mr. Marvin I. Medintz, Attorneys of
Record for Complainant;
Mr. Charles W. Helmig and Mr. Eugene H. Bernstein, Attorneys of
Record for Respondent.

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

This action involves a complaint filed by the Attorney General on behalf of the Environmental Protection Agency on December 7, 1973. The City of Peru (Peru) is charged with causing air pollution in violation of Section 9(a) of the Environmental Protection Act by unreasonably interfering with the lives and property of individuals residing near its electrical generating facility. More particularly, the complaint alleges that emissions from the facility's boilers cause eye discomfort and pain, increased cleaning and maintenance costs, and the prevention of out-door enjoyment.

The facility includes three coal-fired boilers, numbered 3 through 5. The boilers exhaust by-products of combustion through stacks of heights 139.5, 141.5 and 116 feet, respectively. The by-products include particulates and sulfur oxides. Boilers 4 and 5 are the subject of presently valid operating permits granted by the State of Illinois. Boiler number 3 was previously granted a one year variance on November 8, 1973, which required that it remain on coal stand-by and that it be run for emergency purposes only (PCB 73-255, 10 PCB 25). It has not been operated since January, 1974. Units 4 and 5 are spreader stoker boilers which burn Illinois coal with an average sulfur content of 2.17%. The units are equipped with Western Precipitator multiclone collectors whose original stated collection efficiencies were 93.2% and 92.6% respectively. Peru admits the efficiencies of these collectors may have degraded since installation. Generator ratings of the turbines associated with these boilers are 4,000 kw and 7,500 kw, respectively. The Agency admits that particulate and sulfur dioxide emissions are within currently

applicable limitations. In addition to the coal generating units, the facility also has a diesel engine generator and a gas turbine generator with ratings of 6,250 kw and 11,500 kw, respectively. The total system peak electrical demand was 18,100 kw, established in July, 1974.

To the north of the generating station and located on a bluff rising from the Illinois River above the lip of the stacks is a residential area containing single family residences. Several residents from this area testified at hearings held in this case on June 5 and December 16, 1974. These residents uniformly complained of the emissions from the facility's stacks.

Irritation of the eyes was attributed to the emissions by several of the witnesses (June 5 - R. 9, 48, 57; December 16 -R. 37, 80). A physician, Dr. Assalley, described the effect of sulfur dioxide on the lungs and muscosa of the eyes, and attributed his treatment of two area residents for bronchitis and pharyngitis to times of increased "sulfur dioxide and general alfelon (sic) and aromatic hydrocarbon" resulting from the power plant emissions (June 5 - R. 56-7, 60).

The witnesses also described the deleterious effects of the particulate matter on houses, automobiles and other personal property (June 5 - R. 25, 33, 49; December 16 - R. 75). Photographs admitted as exhibits reveal accumulations of fly ash and soot on, and resultant paint damage to, a picnic table, house eave, wood siding and an aluminum storm window (December 16 -R. 75-78).

Many of the witnesses also complained that the particulates and odor from the emissions prevented them from enjoying their property. One resident testified that she is forced to keep her southern windows closed (June 5 - R. 29) while another refrained from using her backyard and screened-in porch (June 5 - R. 41). Another resident testified to at least one occasion when he could smell sulfur fumes inside his house (June 5 - R. 50).

All of the residents indicated that the conditions of which they complain are most severe during and after the conducting of soot-blowing operations at the generating station. They also relate the conditions to when wind is blowing from the south. Furthermore, in a stipulation and proposal for settlement submitted by the parties at the second hearing, Peru admits that analysis of dust samples collected in the affected area indicate that the apparent source of emissions of which the residents complain is the coal-fired boilers of the generating station. On these facts and evidence we feel a violation of Section 9(a) is clearly established as alleged in the complaint.

According to the stipulation, both parties feel substantial relief can be provided the residents by reducing the emissions from coal-fired boilers through reduced operation of boilers 4 and 5, by enhancing the dispersion of the emissions, by limiting soot-blowing operations to times of optimum meteorological conditions, or by a combination of any or all of these strategies. In addition, Peru has been negotiating for an agreement for the purchase of sufficient firm electric power from Illinois Power to permit it to place both boilers 4 and 5 on cold stand-by. The construction and installation of permanent interconnection facilities is estimated to cost \$990,000.

The stipulation further states that dispersion of emissions can be enhanced by erection of a single tall stack through which all the coal-fired boilers would vent, and engineered in conformity with a dispersion analysis based upon modeling techniques agreed to by both parties. The cost of such a stack is estimated at \$750,000. The purpose would be to reduce plant emissions during the interim period of change-over to purchased power. Also, installation of a wind speed and direction anemometer with a chart recorder and smoke density monitors, at a cost of \$6,500, would permit soot-blowing operations to be conducted so as to minimize emissions to the affected residential areas.

After considering alternatives, including backfitting electrostatic precipitators downstream from the existing dust collection equipment, and after considering difficulties in financing and increases in electric rates, both parties jointly concluded that the program described above represented the optimum solution. Accordingly, they entered a proposed settlement consisting of the following terms:

- a) Respondent shall immediately upon approval of this settlement take steps to install a stack with a height to be determined by dispersion modeling based upon generally accepted modeling techniques. Both the dispersion modeling and the dimensions of the stack shall be as agreed upon by representatives of the parties to this Stipulation. The stack, which will be completed as soon as feasible, but not later than October 31, 1976, will have a height of 300 feet or greater in order to alleviate, as nearly as may be, problems experienced by nearby residents with respect to the emission of particulate matter and sulfur dioxide during periods of normal operation of the coal-fired boilers.

b) Respondent, within 3 months of the signing of this Stipulation by the parties, shall install a wind speed and direction anemometer in a suitable location with a chart recorder in the boiler control room. Boiler blowdown shall then only be conducted when the wind is from a favorable direction unless continuous southerly winds for an extended period reasonably require otherwise.

c) Respondent, within three months of the signing of the Stipulation by the parties, shall install smoke density monitors downstream of pollution control equipment on Boiler Nos. 4 and 5 with a chart recorder in the boiler room. The information thereby provided with respect to the effect of boiler operating conditions on emissions and as to emission rates from the boilers will be made available to the Agency.

d) Respondent, within one month of the signing of this Stipulation by the parties, shall order an inspection of the multiclone collectors by the manufacturer. Respondent shall diligently act, as mutually agreed upon by the parties to this Stipulation, to incorporate any suggestions by the manufacturer of the multiclone collector which would reasonably increase the efficiency of the collector. "Reasonably" is here used to mean a significant anticipated benefit on account of an increase in efficiency in light of the cost of upgrading and anticipated period of benefit.

e) Respondent shall diligently act to establish a permanent interconnection with Illinois Power Company and shall diligently construct and install permanent interconnection facilities.

f) Respondent shall diligently negotiate for a firm purchase power agreement on reasonable terms and conditions which provides for purchase by Respondent of sufficient amounts of power to permit Boiler Nos. 4 and 5 to be placed on cold stand-by and to be utilized only when purchase power is unavailable. "Reasonable" is here used to mean in line with other similar purchase power agreements. Pursuant to the above program Respondent shall use all reasonable efforts and due diligence to place Boiler Nos. 4 and 5 on cold stand-by, to be used only when purchase power is unavailable.

g) Respondent shall at all times act diligently to purchase from Illinois Power Company as much power as is required to adequately supply its customers and is available to Respondent under Sections 1, 2, and 4 of Article IV of Exhibit A hereto, save for that power which Respondent is reasonably required to generate itself in compliance with Section 5 of Article V of Exhibit A. (Exhibit A constitutes a temporary inter-connection contract dated August 19, 1974.)

h) In the event it shall appear reasonably certain that Boilers 4 and 5 will be placed on cold stand-by prior to the time work necessary to install a tall stack [as provided in subparagraph (a) hereof] can be completed and it shall further appear that Respondent has diligently and in good faith pursued the timely installation of the tall stack, then such tall stack installation shall not be required by the terms hereof. In the event that Respondent shall be relieved under this subparagraph (h) of the requirement to install the tall stack, Respondent, whenever generating electrical energy, shall, to the extent the appropriate fuel is available to it, utilize either the gas turbine generator or the diesel engine generator, both as described in paragraph 9, prior to the utilization of the coal fired units.

i) Respondent shall file with the Agency quarterly progress reports detailing its progress in completing the program herein provided for, including but not limited to both the financing of the program and the steps taken to accomplish the necessary construction. The reports shall be sent to Control Program Coordinator, Division of Air Pollution Control, 2200 Churchill Road, Springfield, Illinois. Such reports shall cover the calendar quarters and shall be due within 21 days of the final day of each such calendar quarter. A final report shall be filed upon completion of the program herein provided for.

j) Nothing herein shall be construed to be an admission by Respondent of the existence of a violation of Section 9(a) of the Act (Ill. Rev. Stat., ch. 111-1/2, § 1009(a) (1971)). In order to avoid the expense, inconvenience and diversion of City officials from more constructive duties which could accompany protracted hearings to determine whether such a violation might exist, Respondent agrees that in the event the Board finds a violation of Section 9(a) of the Act, Respondent shall remit and shall pay the sum of \$1,500 to the State of Illinois (remitted to the Fiscal Services Section, Environmental Protection Agency). Such payment is in consideration of settlement of the issues raised in the Agency's complaint.

We have reservations about the length of time set out in paragraph (a) of the settlement agreement for the completion of the stack. We feel that one year would probably be an adequate period of time within which to construct the stack. Apparently, Peru desires the extra time in order to effect the interconnection agreement -- thus eliminating the obligation of constructing the stack as provided in paragraph (h). An Agency Motion for Oral Argument on this issue, filed on March 31, 1975, was denied in an Order dated April 4, 1975. In that Order we requested written briefs on the question of time required to construct the stack. In a Supplemental Brief filed on April 7, 1975, settlement as proposed would necessitate additional discovery and relitigation, resulting in possible extension of the final construction of the stack past the date agreed to by the parties. As a result, the complaining citizens would face another summer or two without any remedial steps having been taken. In lieu of a reply brief, Peru filed a letter on April 8, 1975 seconding the Agency position and requesting immediate Board approval of the settlement proposal. We find the Agency reasoning persuasive. Prolonged litigation would only postpone the relief entitled the residents of the area. For this reason we accept the proposed settlement.

We also recognize that the proposed settlement is not a foolproof plan to abate all possibilities of future nuisance. Interconnection with Illinois Power will allow Peru to place its remaining boilers on cold stand-by, but will not prevent emissions during those times when peak performance requirements necessitate renewed operation. We do not condone tall stacks as an effective means of abating pollution. But in this limited instance, where no emissions violations are involved, where the affected citizens reside on a bluff located above the lip of the stacks and where the plan includes a wind speed and direction anemometer to facilitate timely boiler blowdowns, we conclude that the taller stack should help to alleviate many of the citizens' complaints. We would have wished more information on the parties' considerations of alternatives, including electrostatic precipitators, but the record does not provide us with such.

While the Agency admits that particulate and sulfur dioxide emissions are within currently applicable limitations, there is no indication in the record as to whether such emissions will meet the requirements to go into effect on May 31, 1975. Accordingly, our acceptance of this stipulation should in no way be construed as a variance from or approval of a compliance plan for, the requirements of Rules 203(g) and 204. On the contrary, in the past we have twice had the occasion to deny petitions for variance from the Board's regulations by municipalities intending to achieve compliance

by interconnection with Illinois Power, City of Highland v. EPA, PCB 73-288, 13 PCB 167 (1974) and City of Carlyle v. EPA, PCB 73-264 (January 16, 1975). We hold here only that the proposed settlement plan should help alleviate many of the nuisance complaints at issue in this case.

Although Peru denies admission of a violation of Section 9(a) in the proposed settlement (paragraph j), we have found sufficient evidence in the record to warrant such a finding. We accept Peru's agreement to pay the sum of \$1,500 as a penalty for this violation. To help ameliorate citizen fears of stalled implementation of the plan proposed herein, we feel a cease and desist order is appropriate.

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

ORDER

It is the Order of the Pollution Control Board that:

1. Respondent, the City of Peru, shall immediately undertake to implement paragraphs (a) through (j) of the stipulated settlement contained herein.
2. Respondent, the City of Peru, except in accordance with the provisions of this Order, shall cease and desist from further violations of Section 9(a) of the Environmental Protection Act.
3. Respondent, the City of Peru, shall pay the sum of \$1,500 as a penalty for the violations of Section 9(a) of the Environmental Protection Act found herein. Penalty payment by money order or certified check shall be made payable to: Fiscal Services, Environmental Protection Agency, 2200 Churchill Road, Springfield, Illinois 62706, within 35 days of this Order.
4. If repair of the multiclone collectors and construction of the tall stack are deemed necessary a performance bond in the amount of \$100,000 shall be filed with the Agency within 35 days.
5. Within 35 days of the adoption of this Order, the City of Peru shall execute and forward to the addresses noted below, a certificate of acceptance in the following form:

I (We) _____
having read and fully understood the Order of
the Illinois Pollution Control Board in PCB 73-516,
hereby accept said Order, understanding that such
acceptance is irrevocable and renders binding
all terms and conditions thereof.

Signed: _____

Title: _____

Date: _____

Copies of such certificate shall be submitted to the Illinois
Environmental Protection Agency, Air Division, 2200 Churchill
Road, Springfield, Illinois 62706 and the Office of the
Attorney General, Environmental Control Division, 188 West
Randolph Street, Chicago, Illinois 60601.

I, Christan L. Moffett, Clerk of the Illinois Pollution
Control Board, hereby certify the above Opinion and Order
were adopted on the 10th day of April, 1975 by a vote of

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Christan L. Moffett, Clerk
Illinois Pollution Control Board