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PLAINTIFF'S EXHIBIT

BAB-402

June 28, 1955

Mr. J. A. Smith, Chief Coordinator
Babcock Services, Inc.
Two Rector Street
New York 6, New York

North Denver 100,000 kW Reheat

Dear Sir:

We reply to Mr. Bennett's June 17, 1955 letter, etc. relative to arrangement to accommodate future electrostatic dust collector.

Of the several arrangements we believe that the electrostatic should be located immediately following the dust collector so that it will have the full benefit of uniform gas velocity throughout its vertical cross section. This uniform velocity is first established by the tubular air heater and then later by the particular arrangement of the new 5 inch aerotec dust collector. Should the precipitator be located on the outlet of the induced draft, highly stratified gas velocities result that are difficult to iron out, especially if further pressure drop occasioned by a velocity equalizer device is to be avoided.

We also believe that precipitator performance is not affected whether it operates at a negative pressure or at a positive pressure, but uniform gas velocities are essential in both cases.

Since we are locating the dust collector immediately following the air heater, the precipitator should then next follow it.

Therefore we desire the 18L alternate arrangement which has been estimated by B & W Company, and adjusted by you to about $23,000 before erection and fee. This estimate should be checked by you as the indicated drawing weights are about 52,000 lbs. indicating in turn a rather high unit cost including insulation, based by us at 15¢ for steel and 30¢ per sq. ft. for insulation. An inconsistency appears to us in that B & W cost implies a cost of about $190 ft. run of additional and small sized ductwork of about 143 ft. at about $27,000 whereas your estimate for 24 ft. run of much larger breeching at $5500 is $230 per ft. run. Either B & W is high or you are low.

Would you also review the orientation of the induced draft fan as the gas approach is rotating opposite to the rotor rotation. Therefore we believe that the fan should be turned end for end.

B & W layout can be improved as to the location of the gas recirculation fan and its source of gas supply. By locating it at the outside of either induced draft fan rather than in the middle, the gas can be accepted by it so that no north-south run of gas recirculation fan discharge dust is required before the dust takes the east-west run toward the boiler.

Although neither of the drawings forwarded reveal the breeching route to the stack it appears that the basic view continues of a single large sized opening serving two boilers. We are agreeable to this view in which case we presume that said opening will be on the west side of the stack.

Yours very truly,

PUBLIC SERVICE COMPANY OF COLORADO

R. F. Throne
Chief Mechanical Engineer

RFT/lf