

to date. What we intend to start up again is an effort to see if we can find a way to get sulfur out of the stack gases that would be a part of the total program. We can supply you our best estimates, although right at the present moment we are assessing the current state of technology and we won't know what kind of projects we want to propose until we get that done.

(The information requested follows:)

TVA is currently spending a total of about \$475,000 a year for air pollution control research, and is presently estimating an increase in this level of expenditures to an average of about \$675,000 per year over the next several years. A considerable part of this research effort will be directed to the problem of extracting SO<sub>2</sub> from stack gases; and if TVA's research uncovers processes for solving this problem which appear promising, it may want to go into a crash program which will increase the level of its research expenditures in this field substantially.

Mr. VIVIAN. Next question.

When you started this work on air pollution abatement in 1949 as I remember from your testimony, didn't you obtain a great deal of information from others who had built thousands of thousands of megawatts of power installations up to that point?

Dr. GARTRELL. Strangely enough there was very little information available to us. The initial designs of our power stations were based on the best engineering practices at the time. But the thing that brought the air pollution question into focus was the size of the plants that we were expecting to build and the size of the units. The economics of power generation indicated the trend would be toward larger units and more units at individual sites.

So, it was the much greater mass of combustion products that posed the problem.

Mr. VIVIAN. Has the commercial power industry done very much on the subject?

Dr. GARTRELL. Not up to that time.

Mr. VIVIAN. Why did TVA go into this field? Was it because you are in one of the least populous parts of the United States?

Dr. GARTRELL. Because we had an identifiable problem and felt that we should deal with it in the interest of the valley.

Mr. VIVIAN. Suppose the plant that you tried to build had worked successfully. What percentage of the sales cost of power would that have represented? When you amortized that cost through the sale of power, what fraction of the cost would that represent?

Mr. WAGNER. I believe, Mr. Vivian, we did not carry the experiment to that point. We developed the fact that it would be a rather expensive plant, a large plant.

One of the problems was that it would cool the stack gases so much that it would perhaps create an even greater air pollution problem because the stack gases wouldn't rise and the remaining pollutants in them would not be dispersed as effectively in the atmosphere as the hot gases. It was just one of those experiments that was tried, that didn't work, and we didn't carry it to the point of calculating its effect on costs.

Mr. VIVIAN. You could do it with blowers run by additional power. If you were trying to recover sulfur, you might have done it by other means, but I am trying to get some idea of the economics of recovering sulfur in terms of a percentage of the sales cost of electricity.