

STATEMENT OF JOHN B. McALEER, OFFICE, CHIEF OF ENGINEERS

Mr. McALEER. It is a clay silt. Just to follow the problem very briefly, originally the Cooper River had a very small drainage area. There was little silt load coming down into the harbor with a small amount of fresh water, and there was mixing, vertical mixing of fresh and salt water. When the Santee River, with its large drainage area, was diverted originally back in 1942 down through this area, the lighter fresh water came out on the top; and the salt water then intruded on the bottom, and this meant that the silt load, clay silts down from the river, as they hit the salt water in the harbor, along the plane of stratification, with fresh water on top and salt water underneath, it flocculated the sediments out, like in a sewage treatment plant, and the sediments settled to the bottom of the harbor.

Now, the result of this is that there is now an upstream drift on the bottom, in other words, like a cold draft heavy salt water moves upstream on the bottom. It traps the sediments that come down the river. So that we feel that rediverting the flows to the Santee River restores the natural condition in this river, and this is a sound engineering solution.

Once you redivert it back into the Santee River, you can no longer generate a large amount of power at this Pinopolis plant, so you might as well make the most of this water, and generate the power.

So I think the first thing is that we feel that in this plan we have a sound engineering solution for the dredging problem, and that is a Federal dredging cost. We would replace the power losses to the power authority, and the State power authority would pay the betterments that result from this new plant, so the power authority would be paying about one-third of the cost of the new plant.

Mr. HARSHA. Colonel, what would it cost the Federal Government to reduce the flow of water through Pinopolis, thereby reducing the silting at Charleston and buy power to replace the loss of power due to reduction of flow?

Colonel SEIDEL. Sir, in our plan we have set upon ourselves a limitation that the funds used to reimburse for the power loss should not exceed what we estimate would be our reduction in maintenance costs. This is the figure of \$2.5 million.

Mr. HARSHA. Just answer my question. What does it cost you to buy power to replace the power you lost by reducing the flow?

Colonel SEIDEL. Sir, we are not sure. We are not sure at this point that the power is available to be purchased. This is an item that would have to be negotiated.

Mr. HARSHA. Why are you not sure?

Colonel SEIDEL. At the time we made our studies it was indicated that the power would not be available. However, this was a number of years ago, and the situation may have changed.

This is a large block of power, sir. We are speaking in terms of—

Mr. HARSHA. Where did the Bureau of the Budget determine that it would be cheaper to buy power until 1976 than replace the power? Where did it get its figures?

Colonel SEIDEL. Sir, in our report, we explained, as I am doing now, that if the power were available and could be purchased, that the early