NOTES FOR USE AT THIRD POWERHOUSE DEDICATION, OCTOBER 11, 1975

We, in the Bureau of Reclamation, are understandably proud today, and I am honored to take part in this celebration of "power to the people."

Both the literal and symbolic meanings of that phrase are appropriate. For in addition to dedicating a public works project that will greatly benefit people in this area and throughout the West, it is fitting in this Bicentennial year that we also acknowledge the power, the spirit, and the ingenuity of the American people which have combined to make this country great.

We asked my good friend, Hu Blonk, to write an article on the Third Powerplant for our magazine entitled, "Reclamation Era," and he called it a "bragger's delight." Although I'm not usually one to dwell upon superlatives, a little boasting is necessary just for an understanding of the technology involved here. For example:

The Coulee Dam en masse is the largest concrete structure ever built by man. It took over 10½ million cubic yards of concrete to build the original structure. This is enough concrete to lay a two-lane highway and a 3-foot sidewalk from here to Miami, Florida. With the Third Powerplant and Forebay Dam, the total concrete content of the complex grew to nearly 12 million cubic yards.

This Unit 19 turbine and generator, capable of producing more than 600,000 kilowatts is the largest in the world. During the testing,
the generator actually performed at 115 percent of its rated capacity producing 690,000 kilowatts. The generating unit is 18 stories high and the revolving section weighs as much as 10 diesel locomotives.

By itself, the generator is capable of producing enough clean electrical energy to meet the needs of the city of Spokane.

The rotor of Unit 19 turns at only 72 revolutions per minute. Yet at that seemingly slow speed, the outer rim of the 60-foot diameter rotor is traveling at the rate of 154 miles per hour. The turbine runner is 32 feet in diameter and weighs 500 tons.

However, this world record will be short-lived. Three units rated at 700,000 kilowatts each are being built to complete the installation of the six authorized units for the Third Powerplant, and we are studying the possibility of extending the Forebay Dam and adding six more units eventually.

The energy output of all six authorized units of the Third Powerplant will be equivalent to the production that could be obtained from 7 million barrels of oil a year.

When all six penstocks are operating, they will carry a combined flow of 180,000 cubic feet of water per second, which is a greater discharge than all five of the largest rivers in North America. The water flow through just one penstock is \( 2\frac{1}{2} \) times the average flow of the Colorado River below Hoover Dam.

The energy from the Third Powerplant will travel through about 11 miles of oil-filled cable to the cable spreading yard which is approximately miles from here. Although the cables carry
525 kilovolts, they are so well insulated that a man could safely place his hand on the cable an inch and a half from the conductor core itself.

This project has an international flavor. The International Water Treaty with Canada made the Third Powerplant feasible by providing the necessary increased water storage. A Canadian firm designed the turbines for the first three generating units of the Third Powerplant, and Canada is constructing the three 700,000 kilowatt generators. Japan, Italy, Great Britain, and Austria are represented among equipment and materials suppliers, and France will be eventually. Of course, we must recognize the tremendous effort of our own. Numerous domestic contractors and the suppliers have participated in this effort, and they should be commended—both for the job they have done and for their continuing efforts. Since 1967, there have been over 60 different contractors and suppliers working under some 80 contracts to provide what you see here today.

I could go on at length and talk about the numerous benefits that have flowed from the great Coulee Dam complex, and those that will continue to flow virtually in perpetuity for the benefit of the people of this great Nation. However, there are others on this program who I'm sure will do it more eloquently than I, so I shall reluctantly forego that opportunity.
In closing, however, I want to give special thanks to the dedicated men and women in the Bureau of Reclamation, past and present, for their efforts in this undertaking. This physical structure before us demonstrates once again the high degree of professionalism and can-do spirit which combine in Reclamation to comprise what I consider to be one of the greatest engineering organizations in the world. For over 70 years the Reclamation program has been carrying out the will of the Congress in developing western water resources for the benefit of the people. This facility adds a new chapter to the illustrious record of that program, and I am honored to be associated with it.