for completion next year is expected to be even more efficient. This is the Bull Run plant on TVA's Melton Hill Lake, a few miles from the town of Oak Ridge. The plant's single unit has a rated capacity of 900,000 kilowatts. Though the plant is located in strip-mine country in eastern Tennessee, its coal will come from eastern Kentucky under a contract with the Kentucky Oaks Coal Company which calls for delivery of 50,000 tons a week for 15 years at a cost of $3 a ton for 12,500-BTU/lb coal f.o.b. rail cars at Hazard, Kentucky. While not a mine-mouth plant, Bull Run will be served by "unit" trains, made up exclusively of coal cars, which will run a continuous round trip from Hazard to Bull Run.

The Paradise plant with its desolated approaches and lofty smoking stacks has become a symbol for anti-strip-mine partisans, from the most disinterested conservationists to deep-mine competitors. A gritty ash from the tall stacks becomes a nuisance from time to time in the area, and conservationists say that the outflow of clean but warm water, which is the by-product of the steam-plant process, is responsible for "thermal pollution" of the Green River, especially in periods of low water. Electrostatic precipitators will probably be installed in the stacks. And TVA technicians watch carefully to insure that river temperatures don't rise above 95°F which TVA biologists have set as the ecological danger point. On the few occasions when the temperature has reached that point, the discharge of water from the plant has been cut off.

Despite efforts to accommodate its critics, TVA in recent years has had a less friendly press, especially in liberal quarters, than it used to have. Since the beginning of the Eisenhower administration there has been criticism to the effect that, in concentrating on meeting the region's power needs and collaborating with private power companies, TVA has acted more like a utilities company than a public service corporation.

The increase in strip-mine operations and the consequent spread of unreclaimed spoil deposits sharpened, whether justly or not, the censure of

Mohole: Last-Minute Opposition Turned Aside

The National Science Foundation last week announced plans to commence construction of the Mohole platform, but it did so only after an extraordinary closed-door meeting that was hurriedly called to quell a sudden outburst of opposition among some of the country's leading earth scientists.

With cost estimates for construction and 3 years of operation of the deep-ocean drilling platform now totaling $110 million—more than double the figure cited a few years ago—some researchers expressed fears that Mohole would restrict the availability of funds for other research in earth sciences. The response from the National Science Foundation and the White House science office was that Mohole is now so far along that it would be economically and politically infeasible to delay or cancel it; and it was also suggested that the earth sciences would be able to ride the coattails of Mohole and attract expanded support.

The outburst of opposition occurred in August during a summer study on federal support of science, convened at Woods Hole, Massachusetts, under the auspices of the President's Science Advisory Committee. In the course of a meeting of a panel on solid earth geophysics, two votes were taken on the subject of Mohole. In the first, the panelists were asked to predict what they thought would happen (as distinguished from what they thought desirable): "Mohole, Slow-Hole, or No-Hole." The outcome, according to persons present, was a 7-to-2 prediction of "Slow-Hole," meaning, apparently, that NSF would proceed with the project, but at a slower pace than had been announced. The second vote was to determine preference, and on this ballot several participants associated with the project did not vote. The outcome in this case was a unanimous vote for "No-Hole."

When word of this vote reached Washington, several of the panelists, as well as a larger number of persons prominent in the earth sciences, were asked to meet in Washington during the following week with Leland J. Haworth, director of the National Science Foundation. Also present at this meeting was Donald F. Hornig, director of the Office of Science and Technology, and several NSF staff members. According to several persons who were present, Haworth indicated that the commitment to Mohole has proceeded to a point where it would be politically embarrassing and financially wasteful to turn back. When it was suggested that perhaps the pace of the project could be reduced to stretch the costs over a longer period, the response was that it would be most economical to get the platform built and out of the shipyard as quickly as possible. This conclusion was accompanied by the prediction that while Mohole would take a large portion of funds going into research in the earth sciences, it could also serve as a device for bringing greater attention and support to the entire field. No votes were taken at this Washington meeting, and it concluded with what was described as a consensus that, under the circumstances, the only choice was to proceed.

NSF, which is providing all the funds for the venture, has now gone ahead. Last week it announced that it was authorizing the award of a contract for construction of the platform to the National Steel and Shipbuilding Company of San Diego, California, on a bid of $29.9 million. This was the lowest of four bids, which ranged up to $45.09 million. NSF had originally estimated that construction would cost approximately $18 million. The prime contractor for Mohole remains Brown & Root, of Houston, which, in addition to compensation for its design efforts, is receiving a $1.8 million management fee for supervising the project. It is expected that the shipyard will complete drawings within 90 days, and that construction, now estimated to take 2 years, will begin in January.

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