vide practically no treatment of spent pickling solutions and rinse water developed in the steelmaking process. The steel industries almost universally use these processes for water pollution control except where the steel industry is located on the Great Lakes or on the waters of rivers or bays that flow directly into the ocean.

It is my hope that somehow or another Federal interest would center upon the technology of controlling industrial pollution of the air and of the water. For example, a steel mill wherever situated uses water in much the same way and discharges substantially the same kind of pollution into the air. Therefore, the treatment of water after use by a steel mill and the control of the pollution of the air by a steel mill should be substantially the same whatever the water source and wherever a steel mill is situated. The same principle could be applied to various petrochemical industries. Standards for the abatement of air pollution and for the industrial use of water on an industry-by-industry basis would create a uniform, nationwide approach to the problem.

No other industry in any particular place would be singled out for overhead expenses in air and water pollution control, not undertaken or experienced by its competitor. With the utilization of the same technology, no one plant would have a competitive advantage over its counterpart in the same industry with respect to pollution control devices.

There are astonishingly different methods utilized for the treatment of water in the steel industry.

For example, there are different approaches to the treatment of the so-called pickle liquors which are discharged in the steelmaking process.

The Inland Steel Corp. of East Chicago, Ind., proposes to solve this problem by draining off the spent acids into a 4,300-foot-deep well designed to dispose of 432,000 gallons per day of pickle liquors, the prime pollutant in the steel manufacturing process.

On completion of the well, waste acids will be pumped into a 1,880-foot-thick stratum of porous sandstone called the Eau Clair and Mount Simon formations. Initially, 115,000 gallons a day, about 95 percent of the total now generated, will flow down the well. The balance will be used in the plant for other purposes.

The Armco Steel Co. at its Ashland, Ky., plant utilizes giant clarifiers to remove mill scale and employs a hydrochloric acid regeneration plant to eliminate spent pickling solutions into the Ohio River.

At Butler, Pa., the Armco Steel Co. treats all pickle liquor with lime to make an iron hydroxide solution which is pumped into settling lagoons for permanent storage.

In Cleveland, the Republic Steel Corp. plans the disposal of pickle liquor through the installation of a regeneration plant which would permit the reclamation and reuse of the spent acid.

There is also a process known as the Du Pont process in which the waste sulfuric pickle liquor is neutralized with lime to produce magnetic iron oxide, gypsum particles, and neutral water. Both of the resulting solid materials may have byproduct value or, at least, can be used for land fill. This is reported to be a reliable continuous process designed to operate in low-cost steel equipment with minimum operator attention.