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21 July 1967

Mr. Neville Levy, President
Equitable Equipment Company, Inc.
410 Camp Street
New Orleans, Louisiana 70130

Dear Mr. Levy:

This is in reply to your letter dated 13 July 1967 relative to the "Lake Pontchartrain, La. and Vicinity," project.

Your letter raises two questions concerning the above project; namely, the effects of project construction in the Inner Harbor Navigation Canal (IHNC) area (particularly the Seabrook Lock) on riparian industrial plants located canalward of the levee alignment, and the adequacy of the authorized width of the Seabrook Lock to meet prospective navigation requirements. These two questions are discussed separately in succeeding paragraphs.

The project authorization by 89-298 was based on the report "Lake Pontchartrain, La. and Vicinity," dated November 1962. Subsequent to completion of the report, and prior to and after project authorization, personnel of this office have participated in numerous public meetings for the purpose of publicizing the plan.

Two state agencies have been appointed by Governor McKeithen to represent the State of Louisiana in all matters concerning the project design and construction. The State of Louisiana, Department of Public Works, on 2 November 1965, was designated "...the agency to coordinate the efforts of local interests and to see that the local commitments are carried out promptly..." and the Orleans Levee District was designated on 17 January 1966 as the local agency to provide the required local cooperation for the project in Orleans, Jefferson, St. Charles, and St. Tammany Parishes. Planning for the project is being carried out in close cooperation with the above agencies. The Orleans Levee District, in turn, is cooperating closely with the Board of Commissioners of the Port of New Orleans in matters involving the IHNC.

state PW designated project coord.
for local interests and timely
payments

OLB designated local sponsor
for 4 parishes (Orleans, Jeff, St
Charles, St. Tam)

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The Seabrook Lock is an integral part of the Lake Pontchartrain barrier, and, along with control structures at Chef Menteur Pass and the Rigolets and the barrier embankments, will function, by exclusion of tidal inflow, to maintain a near-normal average elevation in Lake Pontchartrain during the passage of hurricanes. The maintenance of a normal elevation in Lake Pontchartrain during hurricanes is essential to the proper operation of the project as designed. Should the barrier be abandoned as a project feature, grades for the south shore lakefront protective system as high as 17 to 18 feet would be required. These grades are as much as 7 feet higher than those required with the barrier in place. A plan of protection not utilizing the barrier concept and providing higher levees was evaluated in the overall studies for the project now authorized, but was rejected because it involved excessive costs and would require a much longer period to construct. The design concept of a controlled level in Lake Pontchartrain requires that control be provided for all water courses connecting Lake Pontchartrain with Lake Borgne, and elimination of the Seabrook Lock would, in effect, negate the bases for the barrier plan.

The Seabrook Lock, in addition to controlling hurricane inflow, will function to provide a salinity regimen in Lake Pontchartrain more favorable to fish and wildlife and other renewable resources such as clamshells, and to mitigate excessive currents in the IHNC. As authorized, the lock and the associated rock dike which will tie the lock to the levees on the IHNC were to be built to elevation 14 feet above mean low gulf (m.l.g.) datum (13.2 feet above mean sea level (m.s.l.) datum). In the course of detailed planning, investigations disclosed that some lowering of the rock dike to achieve stage reductions in the IHNC for certain types of hurricanes was permissible and an elevation of 7.2 feet m.s.l. was determined to be the optimum.

The overall exposure, to the threat of hurricane flooding, of the area between the existing levees along the IHNC from U.S. Highway 90 to Seabrook and the influence of Federal construction on this exposure are functions of a number of complex factors. However, based on exhaustive investigations of tidal phenomena associated with hurricanes, including an analysis of hurricane "Betsy," it may be stated categorically that the effect of the MR-GO on surge heights in the IHNC is inconsequential.

As indicated above, the lowered controlling elevation of the lock will provide for stage reductions at the lakeward end of the IHNC for major hurricanes of certain types by permitting lakeward flow in the canal. In addition, we shall establish operational procedures providing for passing flow through the lock (and through supplemental

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control structures. It is desired to insure an adequate flow in the canal for navigation during smaller hurricanes occurring with relatively low flows in Lake Pontchartrain.

The alignment selected for the protective works in the vicinity of your plant is essentially the same as that of the existing levee, which has been in its present location for many years. This alignment was coordinated with and bears the approval of the Orleans Levee District, local sponsor of the project. It is recognized that increasing the height of an existing levee to enhance the protection it provides in the developed areas landward of it inevitably aggravates the flood threat in areas on the opposite side of the levee. However, in view of the urgent need to protect the densely populated areas of New Orleans and considering the approval of the alignment by local sponsors for the project, we consider that our obligation is to proceed with construction of the authorized improvements as rapidly as practicable.

The matter of the proper size for the Seabrook Lock insofar as the requirements of navigation are concerned cannot be considered independently of the navigation structures to be provided under the project at Chef Menteur Pass and the Rigolets, inasmuch as it is evident that a single opening wider than the 84 feet authorized for the Seabrook and Rigolets locks is all that can be supported. As we explained in our letter of 26 July 1966, consideration is being given, in detailed planning of the project, to providing a wider opening at either lock or at the navigable floodgate to be constructed at Chef Menteur Pass. It is reiterated that we shall be pleased to consider all information supporting the need for a width in excess of 84 feet which you may submit.

We consider that a public hearing would be inappropriate at the present time. However, we shall be pleased to meet with you and others similarly situated, at your convenience, to discuss all matters relating to the Seabrook Lock and the effect of the overall "Lake Pontchartrain, La. and Vicinity," project on the flood hazard to properties located along the Inner Harbor Navigation Canal outside the levee system.

Sincerely yours,

THOMAS J. BOWEN
Colonel, CE
District Engineer