A0004099

CELMV-ED-PG (CELMN-ED-SP/14 Feb 89) (1105-2-10c) 1st End Mr. Burttschell/jl/7246
SUBJECT: Lake Pontchartrain, Louisiana and Vicinity, High Level Plan, Design Memorandum No. 19A - General Design, London Avenue Outfall Canal

CDR, Lower Mississippi Valley Division, Vicksburg, MS 39181-0080
13 APR '89
FOR Commander, New Orleans District, ATTN: CELMN-ED-SP

The subject GDM is approved subject to satisfactory resolution of the following comments:

a. Page 7, para following subpara m. The content of this paragraph differs from the last paragraph, page 16, 1 Jan 89 DTO which is quoted as follows:

"Draft mitigation report with corresponding EIS was prepared and distributed for public review on 16 Mar 88. The completion date for submittal of the final EIS is currently unscheduled pending legal opinion from counsel as to whether local assurers are legally bound to sponsor project mitigation."

You should clarify the requirements of local interests with respect to mitigation.

b. Pages 7 and 8, para 9. In this paragraph it is stated that local interests have had engineering work completed on the parallel protection plan and that supplemental GDM work would be required if the parallel protection plan is to be constructed. You should respond to the following:

(1) Views concerning credit to local interests for their engineering work on the parallel protection plan.

(2) Funding source (and who will do the work) for supplemental work on parallel protection plan.

c. Pages 33, 43, and 48, paras 31, 51h and 60a. Paragraph 31 indicates that wave loading was considered with the "Q-Case," requiring a factor of safety of 1.25; whereas, paragraphs 51h and 60a do not indicate this loading criterion. We understand that only the I-walls bordering the lake will be subject to wave loads and, in that case, wave loading was applied with the "S-Case." Therefore, the discrepancies regarding use of wave loading in paragraphs 31, 51h and 60a should be clarified.

d. Page 43, para 51h. You should assure that the design stages for the butterfly valve structure take into account wave loads or that wave loads (if applicable) are incorporated with other loadings.

e. Page 53, para 71. This paragraph should address the current status and furnish the basis for the exception to compliance with the National Historic Preservation Act.

f. Page 67, para 91. Economic information has not been updated to current price levels and interest rates as required by ER 1110-2-1150.

g. Page 68, para 93. Local interests must concur with the butterfly control valve plan before you proceed with the recommendations contained in this paragraph.

h. Plates 6,9 and 10. From the information on these plates, it appears that it will be difficult to install the butterfly valves into the structure due to limited access and the confined nature of the valve bays. Also, after the structure is in operation it appears that the valve cannot be removed due to the location of the needle girder recesses. There is not enough room between the needle girder locations and the machinery house overhang to allow the valves to be removed either from the lakeside or the pumping station side. While the likelihood that the valves will need to be removed is small, the possibility should be considered. The installation and removal of the butterfly valves should be discussed.

i. Plates 42-94. These I-wall analyses assume all sand levee and foundation soils. However, the borings through these reaches (see Plate 39) show silt and clay layers in the levee and foundation. In the DDM, these plates should be revised to utilize the most conservative stratification for the I-wall stability analyses.

j. Plates 66, 67, 68 and 70. These stability analyses plates show no clay layers above el-41. However, Borings 3-LUG and 4-LUG show very soft clay layers (and "no sample") in the vicinity of el-15; and Boring 32 very soft clay between elevations -18 and -20. If these very soft clays were included in the referenced stability analyses, lower than allowable factors of safety would result. Borings should be made during the DDM studies to better delineate these soft clay layers, and if present, they should be included in the appropriate DDM stability analyses.

k. Plate 94, et al. You should furnish a table which summarizes the critical bending moments and deflections (and identify corresponding case loading) along with the sheet pile section used for each stability section shown.

FOR THE COMMANDER:

for William R. Bill
FRED H. BAYLEY III
Chief, Engineering Division

Encl
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CF:
CEEC-EB (w/9 cys encl)