17th Street Canal Area of Concern

Question 1: What is the issue with the floodwall at the 17th Street Canal?

Answer: The U.S. Army Corps of Engineers detected an area of concern in a section of the 17th Street Canal floodwall located on the east bank of Orleans Parish in the vicinity of the Veterans Highway Bridge. The tip of the floodwall steel sheet pile is within 2 feet of the sandy layer of soil. Guidelines recommend a separation of 5 feet or more; if the separation is less than 5 feet, a seepage analysis is recommended.

Question 2: What led the Corps to investigate this section?

Answer: Since Hurricane Katrina, the Corps has relied upon the independent Interagency Performance Evaluation Taskforce (IPET) for important lessons. Once IPET identified the failure mechanism for the I-walls in the outfall canals, this information was used in the evaluation of the remainder of the I-walls to develop new stability calculations.

This section of the 17th Street Canal is similar to the London Avenue Canal area (sand foundation), so the lessons learned from the IPET-initiated London Avenue assessment are being applied for this area of 17th Street Canal.

Question 3: How was it discovered?

Answer: The area of concern was discovered through the Corps' regular, ongoing geotechnical work to verify safe water elevations at the 17th Street Canal. Analyses by IPET determined that a gap can extend to the bottom of the sheet pile tip allowing water to penetrate to the sheet pile tip. Soil borings were taken all along the canal followed by seven geoprobes at 50-foot intervals near the Veterans Highway Bridge on the Orleans Parish side to evaluate the elevation of the top of the sand layer in the area. Since the separation of the sheet pile tip from the sand layer was between 2 to 3 feet, seepage analyses were performed.

Question 4: What are the implications?

Answer: The Corps is applying important lessons learned from IPET. Since it was determined that water went through sand and under sheet piling during Hurricane Katrina, new safety standards were implemented. Such guidelines ensure additional protection. The Corps has performed a seepage analysis and determined the wall is stable up to an elevation of 6 feet. The Corps plans to add fill material to the site for added safety.

Question 5: If there should be heavy rains before the hurricane season, will the floodwall hold?

Answer: Yes. The floodwall has adequate capacity up to an elevation of 6 feet, which is the current operational safe water elevation for the canal.

Question 6: Will the area of concern impact safe-water elevations?

Answer: No. An additional analysis has been performed to verify that the area of concern is safe at the current safe water elevation of 6 feet. To reinforce the area, fill material will be added to raise the area to a safe water elevation of 8 feet.

Question 7: Will the area of concern impact pumping capacity?

Answer: No. The reinforced section will not have an effect on pumping capacity.

Question 8: How will this section be repaired?

Answer: To reinforce the area, clay and stone material will be added and the levee crown at the floodwall will be raised to an 8-foot elevation. Plans to repair the levee involve adding a layer of clay from waterline up to an elevation of 8 feet and putting stone material in below the water surface. A small earthen section will also be required on the protected side of the floodwall. All work is to be done within the existing rights of way.

Question 9: Will it be repaired by the start of the 2007 hurricane season?

Answer: Yes. Strengthening of this area will be complete 1 June. Plans and specifications will be done by the second week in April. Construction will begin about two weeks later.