

C8. OPERATION AND MAINTENANCE.

C8.1 General. The new Bayou Sorrel Lock will be operated 24 hours per day seven days per week to provide navigation passage through the East Atchafalaya Basin Flood Protection Levee via the Morgan City to Port Allen Alternate Route of the Gulf Intracoastal Waterway. Waterway traffic consists of a mix of commercial barge tows, recreational boats, fishing craft, and other vessels. Traffic will be processed through the lock under the direction of the Lockmaster as provided by Title 33, Part 207.180 of the United States Code of Federal Regulations. Operation of the lock will be in accordance with an Operation, Maintenance, Repair, Replacement and Rehabilitation (OMRR&R) Manual and a Water Control Manual written specifically for the lock during the construction phase.

C8.2 Normal Operations. Under normal conditions all vessels will be locked through the structure. Locking procedures for northbound vessels consist of closing the north gates, then raising the water level in the chamber to the floodside water elevation through the partially opened south gates. After the chamber is filled the south gates will be fully opened to admit the vessel or vessels to the lock chamber. Once in the chamber, the south gates will be closed and vessel crews will tie off to floating moorings in the chamber walls or to other vessels as directed by the lock operator in charge. Once all vessels are secured the north gates will be partially opened to allow the water level in the chamber to drain to the protected side elevation. Once the water level is equalized the north gates will be fully opened and the vessels will be allowed exit the chamber. The reverse of these procedures will be followed for southbound lockages.

C8.3 Low Water Operations. During seasonal low water conditions in the Atchafalaya Basin, when the water surface differential across the structure is minimal, the lock may be operated in an open-pass mode whereby both sets of lock gates remain fully opened and vessels are permitted to freely transit the lock. However, navigation use of the lock shall remain under the direction and control of the Lockmaster.

C8.4 Operations During Major Repair Events. Major repairs to the lock gates will be carried out on about a 12-year cycle. Repairs will generally consist of sandblasting, painting, steel repairs and replacement of worn parts of the lock gates. The lock gates would be removed from the lock one pair at a time and repaired at an off-site location. Repair work would typically be scheduled for the low water season so that while each set of gates is removed from the lock; the structure

may continue to pass navigation either operating in an open-pass or floodgate mode. A typical repair sequence would consist of removal of a pair of lock gates from the lock during a three to five day closure, followed by a 45-day period of open-pass or floodgate operations while repairs are completed off-site. After off-site work is completed the gate bay for the refurbished gates would be dewatered and the gates reinstalled and adjusted during a 10 to 14 day lock closure. Concurrently the second set of gates would be removed from the structure for off-site repairs. A second 45-day period of floodgate or open-pass operations would ensue while the second pair of gates is repaired, followed by a second 10 to 14 day closure for dewatering the gate bay and reinstallation of the refurbished gates.

C8.5 Estimated Average Annual Operating Cost. Based on available information, the estimated average annual operations cost for the new Bayou Sorrel lock is \$1,200,000.00. This figure includes payroll, utilities, and supplies used at the lock, and applicable charges for District overhead.

C8.6 Special Operating Procedures.

C8.6.1 Freshwater Diversion. In the advent of draught the lock may be operated in concert with Port Allen Lock to divert freshwater from the Atchafalaya Basin into the waterways on the protected side of the levee system, to recharge water supplies and/or improve water quality. Water diversion operations will be carried out incidental to normal operations for navigation as discussed in section C2.2.1.4.

C8.6.2 Flooding Between Port Allen Lock and Bayou Sorrel Lock. In accordance with a 1994 Memorandum of Agreement between the U.S. Army Corps of Engineers, the Captain of the Port of New Orleans, the Louisiana Office of Emergency Preparedness, and the Iberville Parish Office of Emergency Preparedness, the lock would be closed to navigation when the north gage exceeds 7.3 feet MLG (6.5 feet NGVD) and remain so until the gage reaches 6.9 feet MLG (6.1 feet NGVD) and falling.

C8.7 Maintenance Requirements. Bayou Sorrel Lock will be maintained in accordance with standard New Orleans District practices and all applicable regulations. Preventative maintenance will be carried out on lock equipment in accordance with manufacturer's recommendations. An automated maintenance management system will be used to facilitate effective execution of the

preventative maintenance program, maintain inventories of equipment, spare parts and supplies, and keep records for future reference. Estimated maintenance costs for the various lock alternatives studies as well as the existing lock are contained in Annex 5 of this Engineering Appendix.

C8.7.1 Schedule of Maintenance. Major repairs to the lock gates will be carried out on an approximate 12-year cycle, or as needed to maintain the integrity of the paint coating system, and repair or replace worn or damaged parts. Any repairs required to the gate bay monoliths will be executed concurrently with gate repairs. Repairs to guidewalls and dolphins will be carried out as needed to replace individual components, which become worn out through normal service or sustain damage in marine accidents. Approach structures will be replaced in their entirety when periodic maintenance is no longer a practicable solution to maintaining their structural integrity.

C8.7.2 Periodic Inspections. Comprehensive structural, mechanical, and electrical inspections of the lock and appurtenant structures will be carried out as prescribed by Periodic Inspection Program requirements. Scour and settlement surveys will also be conducted as prescribed by Periodic Inspection Program to detect conditions, which could compromise structural integrity. Any deficiencies noted in the periodic inspections or surveys will be remediated with all practicable dispatch.

C8.8 Project Security.

C8.8.1 Site security for Bayou Sorrel Lock will normally be effected through maintenance of perimeter fences to control land access to the lock reservation, and the use of standard locks to control access to buildings and storage areas, which may contain pilferable equipment. Entrance gates within the perimeter fences will normally be kept open to allow access to visitors during the hours from 7:00 a.m. to 3:30 p.m. on weekdays, while the Lockmaster or other day-shift personnel are on duty. Access to the lock reservation after hours will be controlled at the discretion of lock operations personnel on duty. Special security measures will be implemented as ordered to mitigate the threats of terrorism or acts of aggression against the government. Effective key control for buildings, and other secured areas will be the responsibility of the Lockmaster. Standard internal control practices will be applied for inventory control and the prevention of waste or abuse of government facilities or equipment.

C8.8.2 Lock operations personnel will report damage to government property incidental to the lockage of watercraft as required by regulation. Reimbursement for damages will be sought through legal recourse. A video monitoring system will be used to monitor and videotape the passage of all vessels through the lock. Video taped images that record incidents of damage to the lock or approach structures will be preserved as evidence to support claims for reimbursement from offending parties.