

WBV - 90

GIWW WEST CLOSURE COMPLEX - PUMP STATION

Inspection Report

Date: 5/27/2011 **Start Time:** 6:00 AM **End Time:** 1:00 PM

Weather: Clear

Attendees: Danny Caluda

-
1. WBV-90 GIWW West Closure Complex, Jefferson and Plaquemines Parishes, Louisiana
Contractor: GIC
Contract Award Date: 17-Apr-09
Substantial Completion Date: 25-May-13
Contract Value: "Negotiated Ceiling"
Project Complete: 82.74%
Details of site inspection are provided below:

2. INTAKE & DISCHARGE BASINS

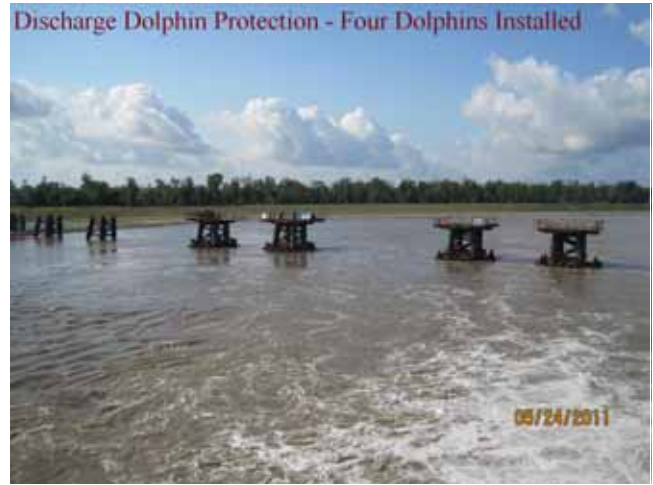
- Excavation of all areas within the intake and discharge basins are now complete..
- The Contractor has completed the installation and grouting of the intake dolphin protection piles and are currently performing touch-up work on the paint.
- Four (4) discharge dolphin pile templates have been placed and piles have been driven for those installations.
- Pile driving for the sector gate needle girder platform is completed and the Contractor is placing friction supports on the concrete piles to begin placing deck forms (See Issue 6). GPS Coord: 2948.9071 N, 09004.1497 W



Intake Dolphin Pre-Final Inspection



Discharge Dolphin Protection - Four Dolphins Installed



Intake Dolphin Navigation Lighting



3. PUMP STATION:

Pump Station is 73.0% complete.

STRUCTURE:

A pre-final inspection of the miscellaneous metals was performed during this reporting period and minor corrections to the metal stairways, platforms, handrails, access hatches and ladders were placed on the punch list.

PUMP TRAIN:

During the past two (2) weeks, Pumps 6, 7, 8, 9, 10, 11, 12 and 13 were reassembled, realigned, break-in tested and wet tested for four (4) hours. There were some minor issues regarding fuel delivery and engine speed control but all issues were corrected and the four (4) hour tests were completed as specified. Test results have been submitted and are being reviewed, but preliminary vibration testing indicates that most recorded vibrations were in the 0.060 inches per second range and the allowable vibration according to Hydraulics Institute Standards ANSI/HI 9.64 is 0.28 inches per second RMS for this pump speed. All pump bearing temperatures stabilized well below the 200 deg. F maximum limit with 134 deg. F being the maximum bearing temperature recorded on a non-flooded upper enclosing tube bearing.

This brings the pump count to eight (8) that have been officially wet tested as required for the 01 June 2011 Interim Protection deadline. The Contractor intends to complete an additional pump next week and two (2) others in the next several weeks.

STATION INTAKE:

The flow of water into the intake of the pump appears to be very gentle with no indication of vortices that would cause any flow conditions that are detrimental to long term pump life. While pumping at the 990 rpm engine speed (low speed), the trash rake cleaners were tested and little debris was collected. Most pumps were tested without the screen cleaners operating and intake head losses through the screen rarely exceeded 0.3 feet.

BUILDING:

All work has been completed on the building except for the installation of personnel doors and sealing pipe and louver penetrations. There appears to be some pre-cast panel rain leakage during the major rainfalls that have occurred in the past weeks. However, it has yet to be determined if this is leakage from the unsealed openings or leakage in the pre-cast horizontal joints itself. Once the openings are sealed, a better determination can be made.

ACCESS BRIDGE:

Work was completed on the fuel oil containment piping and all clam shell welds have been tested. Guard rails have all been installed except for some custom pieces required at the erection bay area adjacent to the intake at bay 3. This completes all construction on the access bridge except for any punch list items that may be listed.

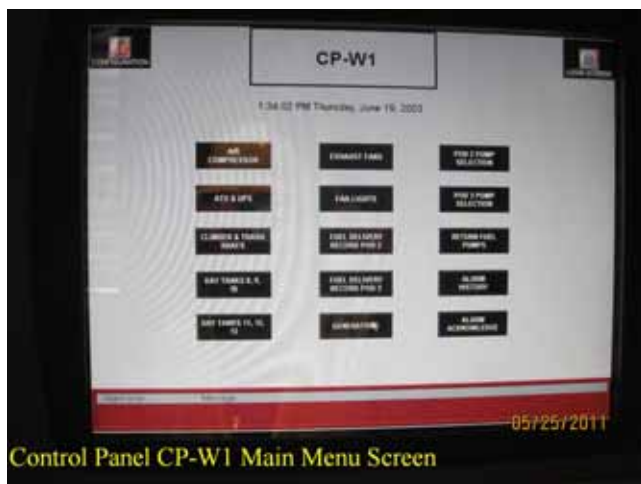
MECHANICAL:

-The engines, gears and pumps are being prepared on pumps 4 and 5 for re-installation of the pumps, re-alignment and an upcoming test run.

- Generators G1, G2, and G3 have been load tested.
- The sluice gate hydraulic power unit (HPU) has been connected to the sluice gate cylinder actuators and is currently being tested.
- Jacket water, gear coolant and after cooler piping continues to be installed in bays 3 through 5.
- The safe house fire pump has been installed.
- Generator radiator exhaust ducts have been completed and louver operation is now functional.
- Generator engine exhaust expansion joints have been installed on the four (4) generator exhaust pipes.
- All flower pot mill work has been completed on pumps 6 through 13.
- Fuel Return Pumps are operational in auto mode.
- Fuel Transfer Pumps are operational in manual mode.

ELECTRICAL:

- Control Panels CP-E1 and CP-W1, which provides annunciation and control for the air compressors, generator automatic transfer switches, climber screen cleaner mechanisms, day tanks, exhaust fans, FAA lighting, storage tank fuel delivery, pump status and generator status, are being configured and displays are now available.
- Fuel transfer auto control is being arranged such that automatic operation of the main diesel storage tank transfer pumps is functional without the SCADA system being operational. This will allow auto control for interim operations should there be a storm event.
- Power and control is being provided for the safe house fire pump.
- Fuel piping leak detection sensors are being placed in the fuel pipe containment systems. GPS Coord: 2948.9071 N, 09004.1497 W





Continued Milling of Flower Pot @ Bay 7

05/21/2011



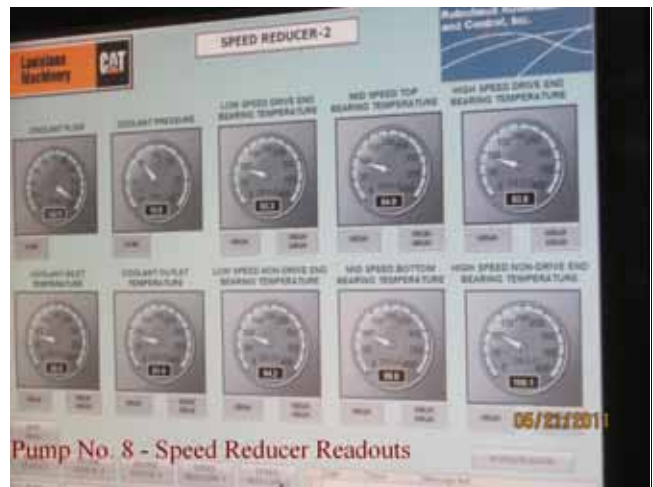
Pump Discharge @ Pump 13 - Low Speed 990 RPM

05/21/2011



Refilling Coolant System After Leak - Venting Air/Steam

05/22/2011



Pump No. 8 - Speed Reducer Readouts

05/21/2011



View of Pump Operating Floor During Pump Reassembly

05/23/2011



Pump Installation Progress Chart - 05/24/11

05/24/2011



Pump No. 8 Operating



Shims - Indicating Bearing Clearance - (.17 mils)

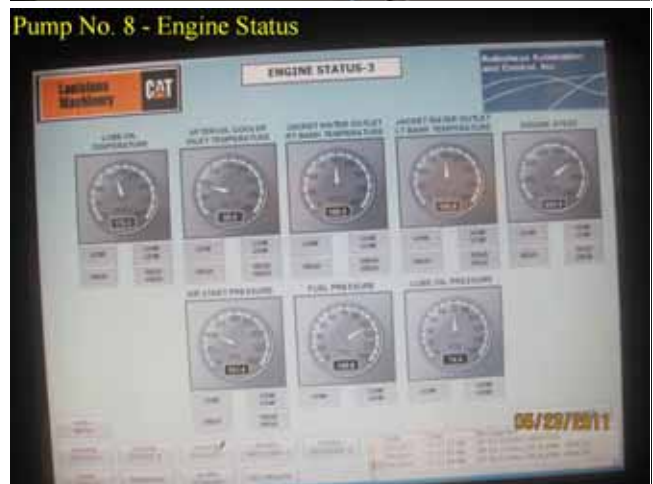
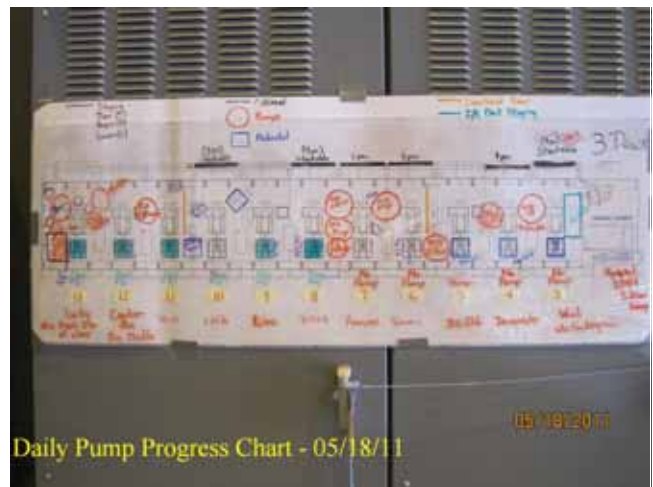


Miscellaneous Metals Inspection - Lift Station Platform



Placing Steel Pedestal in Bay 10







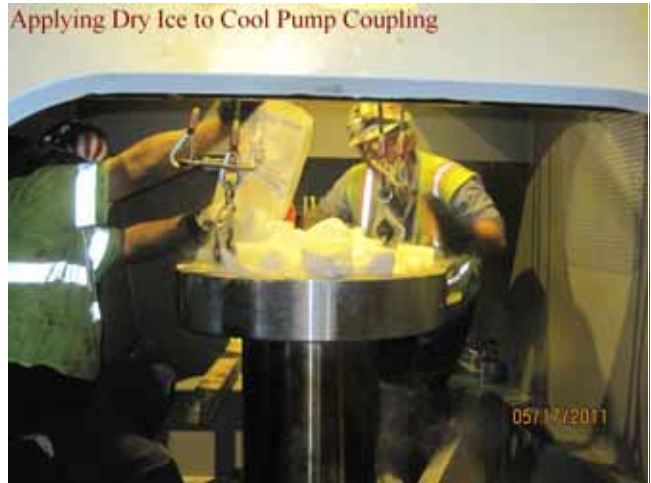
Radiation Exhaust Duct Work Placed at Generator G4



Pressure Testing Jacket Water Coolant Piping at Pump 7



Shim Indicating Bearing Clearance (17 mils)



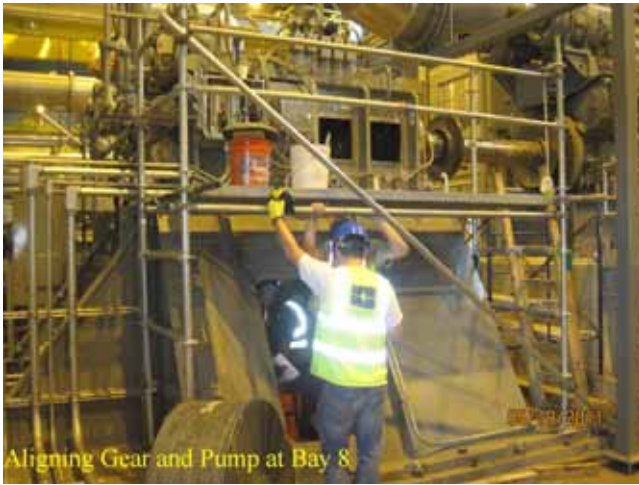
Applying Dry Ice to Cool Pump Coupling



Reinstalling Exhaust & Air Intake Piping on Pump 13



Close-up of a pressure gauge

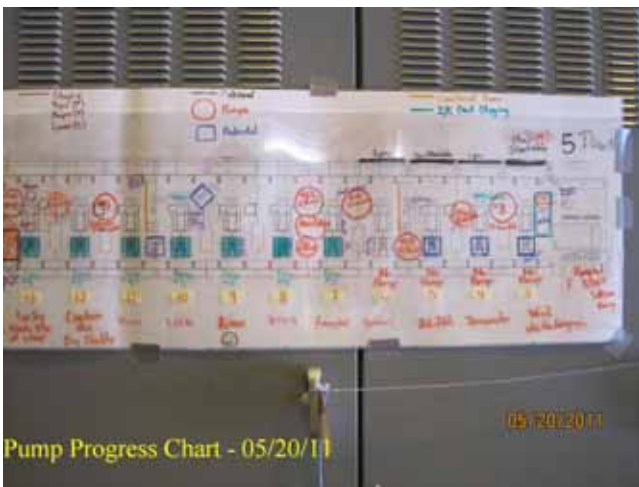


Aligning Gear and Pump at Bay 8



Dropped Pump Shaft to Locate Noise in Pump 8

05/20/2011



Pump Progress Chart - 05/20/11

05/20/2011



Dry Ice Cooling Pump to Gear Coupling

05/17/2011



Pump No. 8 Speed Reducer Readouts

05/21/2011



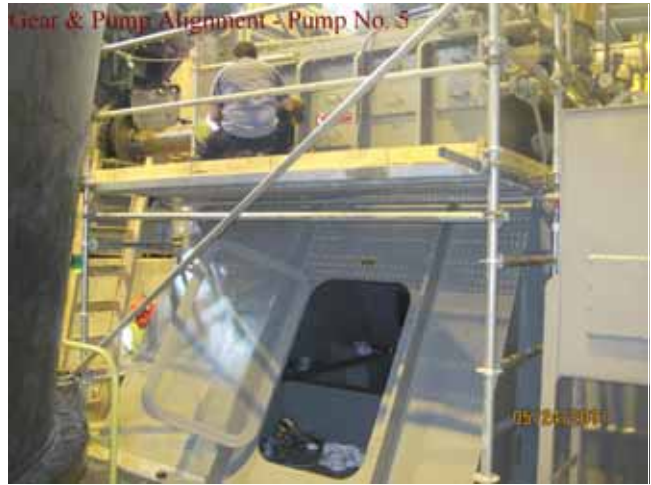
Pump 11 Operational @ 990 rpm - Low Speed

05/18/2011



Pump No. 8 Discharge at Low Speed (990 RPM)

05/23/2011



Gear & Pump Alignment - Pump No. 5

05/26/2011



Leaking After Cooler/Coolant Connection

05/24/2011

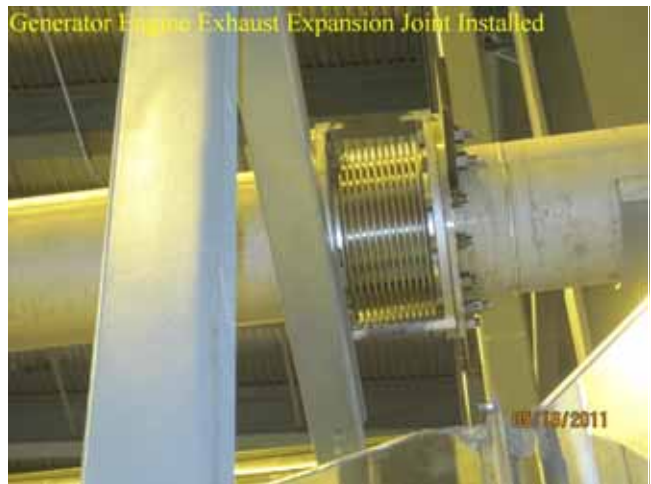


Begin Break-in & Wet Tests for Pump No. 6



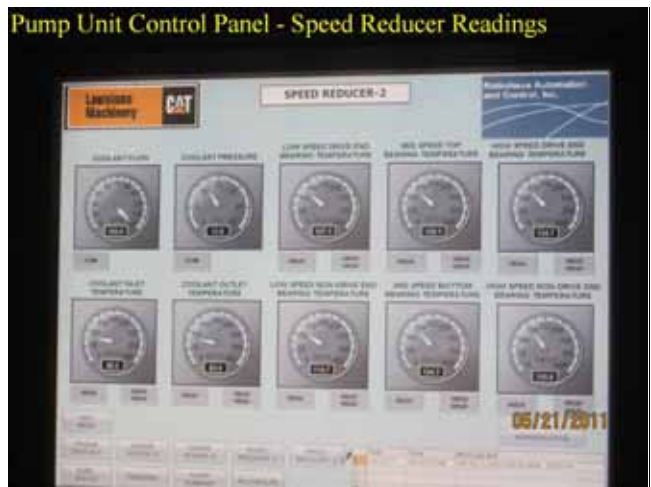
Stairway Support Requires Grouting

05/26/2011



Generator Engine Exhaust Expansion Joint Installed

05/18/2011





Installing Pump No. 3 Discharge Column Pipe



Pump Engines 4 & 5 Being Prepared for Operation

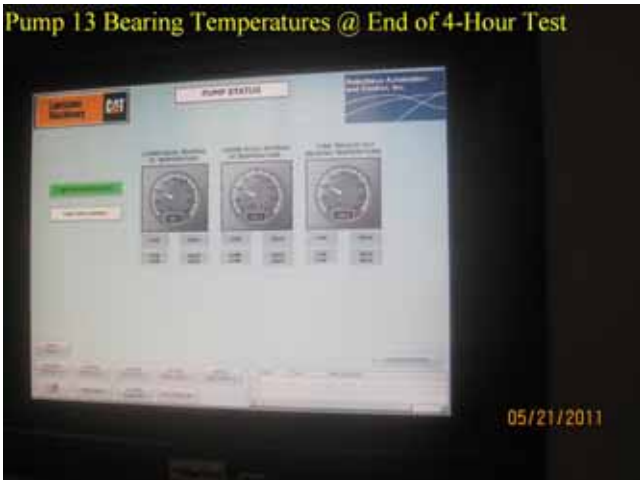


Pumps 7 thru 13



Gear & Pump Alignment - Pump 6

Pump 13 Bearing Temperatures @ End of 4-Hour Test



Testing Control Panel - CP-W1

Pump No. 6 Operating at 750 RPM Break-in Speed



Installing Temporary Centering Straps on Pump 13

Safe House Fire Pump Installation



Placing Right Angle Gear Speed Reducer

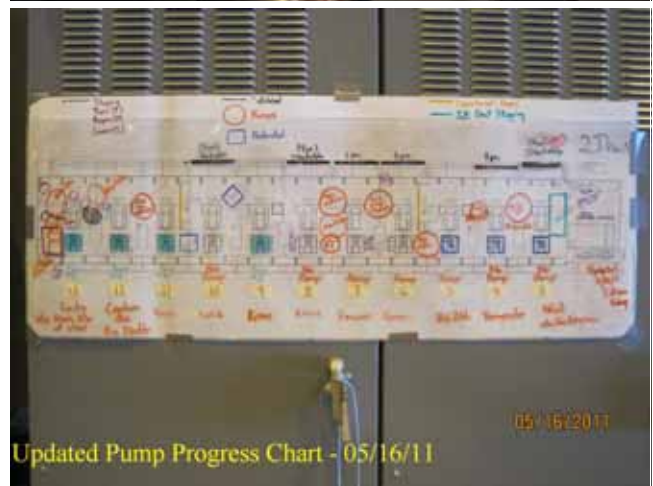


Pump No. 8 Bearing Temperatures @ Break-in Start-up



Pump Unit Control Panel - Pump Bearing Temperatures





Pump No. 8 Bearing Temperatures after Re-start



Pump No. 8 Operating



Pump No. 6 Wet Test - Low Speed Operation



Pump 13 @ 990 RPM & Pump 8 @ 750 RPM



Preparing Generator G4 for Commissioning

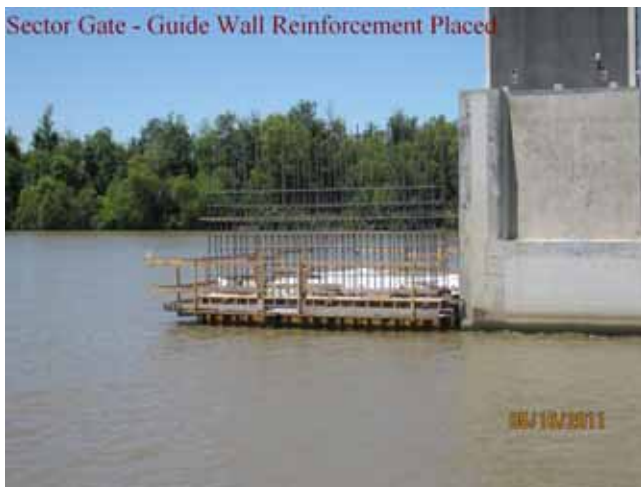
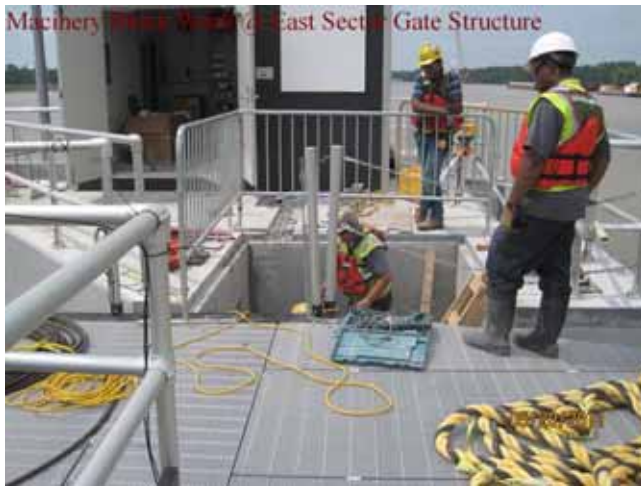




4. SECTOR GATE:

- Sector Gate is 80% complete.
- The sector gate leaves continue to be tested and minor alignment continues to be performed.
- A Control house has been placed on the eastern gate structure.
- The pinion gear is being installed on the east gate structure mechanical block.
- Work continues on the fender guide wall on the southwest and northwest corners of the structure.
- The closure wall work continued with the welding of batter piles to the A-frames and grouting of the piles and jackets. (See Issue 7 - Closure Wall). GPS Coord: 2948.9071 N, 09004.1497 W





5. Sluice Gate Structure is 95% complete.

- All five (5) hydraulic actuators have been connected to the five (5) installed gates. The concrete decking at units 1 through 3 has been modified to better contain the placement of the hydraulic tubing.

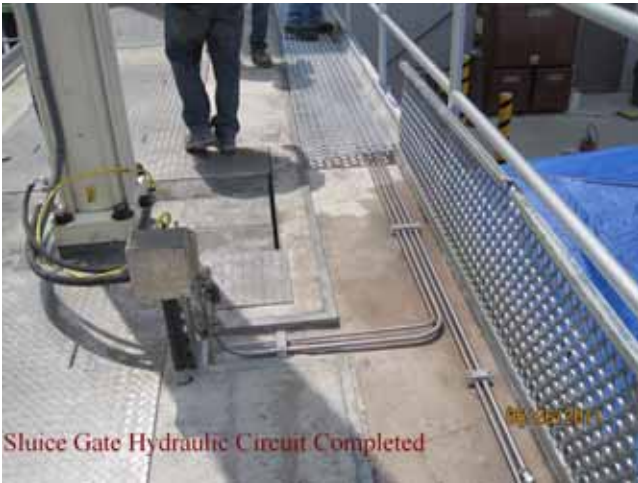
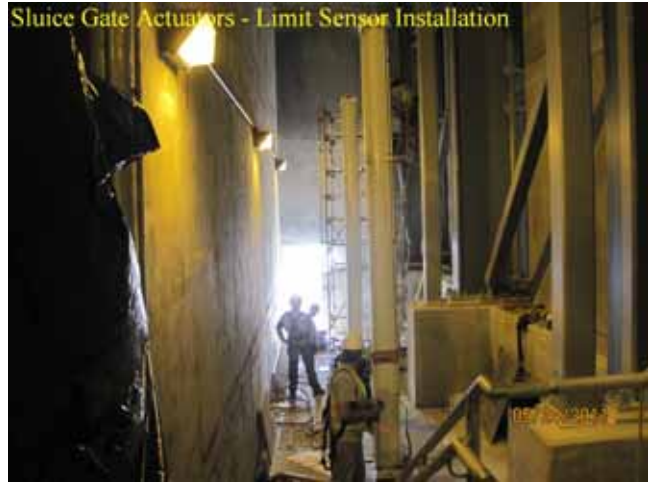
- Gate sensors and limit switches have been installed and the hydraulic pressure unit (HPU) is now functional.

- Gates were being adjusted and testing is being performed. GPS Coord: 2948.9071 N, 09004.1497 W

Sluice Gate Actuator - Control Panel



Sluice Gate Actuators - Limit Sensor Installation



Sluice Gate Hydraulic Circuit Completed

6. EASTERN TIE-IN:

Flood Walls:

- Eastern Tie-In Flood Wall is 100% complete.
- Concrete footings continue to be placed along the I-wall surrounding the edge of the rip rap placement.

Access Bridge:

- Containment piping for the fuel tanks has been completed and the welds have been tested. Leak detection sensors are being placed between the carrier and containment piping systems.

Fuel Tank Farm:

- Fuel tanks are storing fuel and the transfer pumps continue to be tested by pumping between storage tanks and the return fuel tanks. Transfer pump controls are being configured for interim automatic operation until SCADA becomes available.

Intake Stop-Log Storage Platform

- The piles have been driven and capped for the storage platform and one grade beam has been formed and concrete placed.

Waste Water Treatment Plant

- Cofferdam sheet piles have been driven, enclosure has been excavated, a dry bottom has been placed and the reinforcement for the bottom slab has been placed.

Needle Girder Platform and Marine Fuel Loading Dock

- Piles have been driven for this platform and friction collars are being placed on the concrete piles so that deck forms may be placed. GPS Coord: 2948.9071 N, 09004.1497 W



7. 404 C FLOOD WALL, WATER CONTROL STRUCTURE AND CLOSURE WALL:

The Water Control Structure is 84% complete.

The 404C Flood Wall is 97% complete.

The Closure Wall is 49% complete.

404 C Floodwall & Water Control Structure:

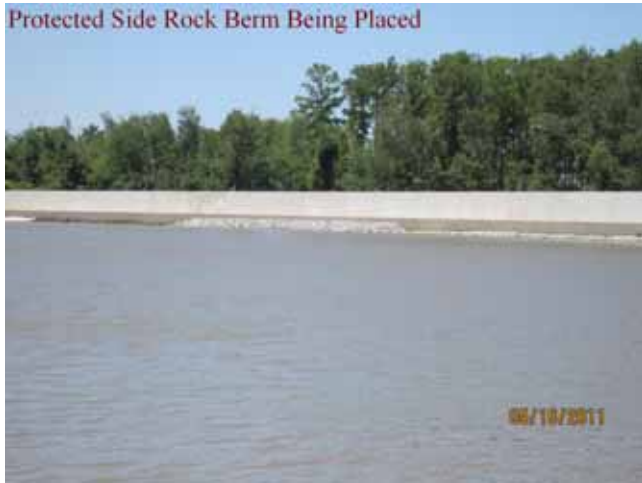
- The sluice gates for the Water Control Structure have been installed and the system has been watered-up; allowing flow from the Old Estelle Pumping Station discharge canal to enter the Intercoastal Waterway. This permitted the final monolith foundation to be poured at mono, 3 and forming of the final wall at that monolith.
- The foundation face on the protected side of the wall has been painted and painting of the protected side face of the wall has begun.

Closure Wall

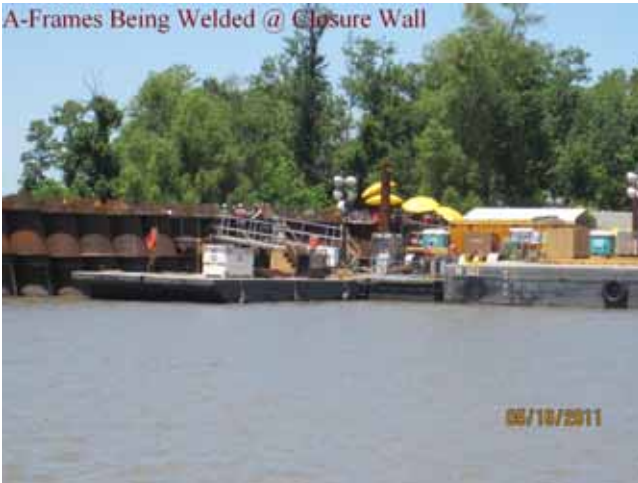
- The Contractor has completed driving vertical piles 1 thru 30.
- The Contractor has completed driving battered piles 1 thru 30.
- The Contractor has completed cutting piles and installed A-frames on piles 1 through 30.
- Sheet piles have been placed between the king pipe piles on piles 1 thru 30.
- All A-frames have been welded to their pipe piles and the piling and jackets have been grouted.

This completes the work scheduled for the temporary closure wall. GPS Coord:
2948.9071 N, 09004.1497 W





A-Frames Being Welded @ Closure Wall



Mono 5, Flood Side Foudation - Honeycomb Repair Req'd



Monolith 2/3 Construction Joint



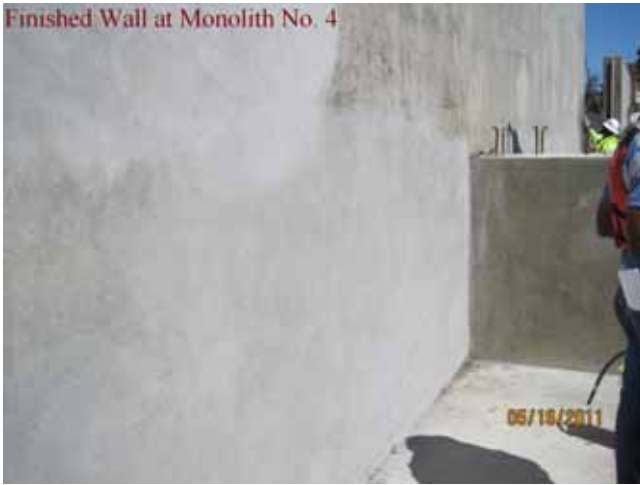
Old Estelle Canal



Monolith 9 - Wall Placement



Finished Wall at Monolith No. 4



Water Control Structure - Watered-up



Closure Wall Batter Piles - Welded and Grouted

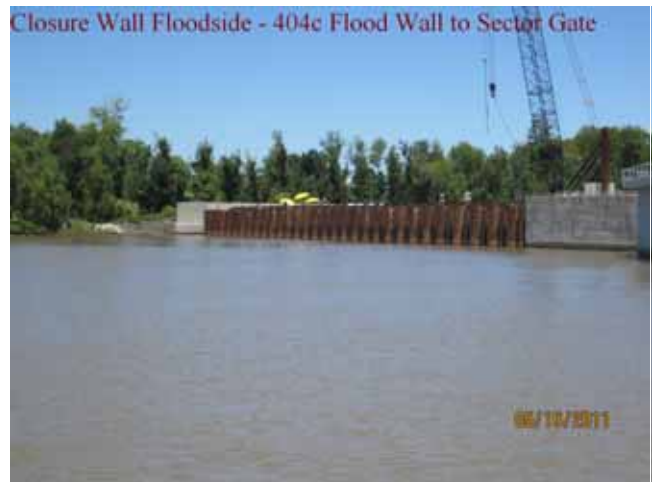


Painting 404c Floodwall on Protected Side

Protected Side Rock Berm Being Placed



Protected Side Sluice Gate Opening







Inspector Name(s)

Danny Caluda

Inspector Signature(s)

Signature on file