PL-646 CWPPRA
PROJECT COMPLETTION REPORT

PROJECT NAME	Jonathan Davis Wetland Restoration – Construction Unit #3
CWPPRA/STATE PROJECT NO	BA-20

Report Date December 16, 2003 By: Natural Resources Conservation Service

1. Project Personnel

DNR Project Manager	Luke LaBas	(225) 342-4102
DNR Construction Project Manager	Brain Babin	(985) 447-0995
DNR Monitoring Manager	Melissa Hymel	(504) 280-4074
Federal Agency Project Manager	John Jurgensen	(318) 473-7694
Federal Agency Contracting Officer	Ralph Broome	(318) 473-7781
Federal Agency Design Engineer	Cherie LaFleur	(318) 473-7674
Federal Agency COTR	Dale Garber	(985) 447-6050
Federal Agency Inspector	Melvin Rodrigue	(985) 447-6050

2. Project Location & Description

The project is located in the Barataria Basin, east of Lake Salvador and is bounded on the north by the Pailet Canal, on the east by Louisiana Highway 301, on the south by Bayou Perot and Bayou Rigolettes, and on the west by the Gulf Intracoastal Waterway. The project is located in part of T16S-R22E Section 1 and part of T16S-R23E Section 2. This project is intended to counter wetland loss in the Jonathan Davis Project Area that has been caused by a number of factors. Increased water exchange, saltwater intrusion, tidal scour, and shoreline erosion along Bayous Perot and Rigolettes are the major problems affecting the area.

This project will be completed in multiple construction contracts. To date, three phases of construction have been completed, and one additional construction contract will be required to complete the project. **This project completion report is representative of only that portion of the work completed in Construction Unit #3.** The work completed in Construction Unit #3 is located primarily in the northwestern portion of the project area.

This project consisted of the installation 13,088 linear feet of shoreline stabilization rock riprap revetment. 11,085 linear feet of the revetment was placed on the north bank of Bayou Perot beginning at the GIWW and proceeding to the east. A second reach (East Reach) of rock riprap revetment 2,003 linear feet in length was placed on the north bank of Bayou Rigolettes, tying into Structure 20 and proceeding west.

3. Final Constructed Features

All of the rock riprap used in construction of this project was COE R-400 gradation. The rock riprap revetment was placed with a 6' top width and 3:1 side slopes. The shoreline stabilization sections were constructed to an elevation of +3.5 (NAVD 88). All rock sections were constructed on a geotextile fabric with 400 lb/in ultimate strength in any principal direction. Settlement plates were installed along the rock riprap revetment spaced approximately 1000 feet apart. The rock dike alignment was moved in some locations from the planned alignment due to shoreline erosion that occurred from the time the original design surveys were taken to the time of construction. For additional information see attached "AS BUILT" plans.

4. Project Cost Elements

	CWPPRA Project Cost Estimates**	Cost Incurred as of Construction Completion
Construction	**THIS INFORMATION WILL BE COMPLETED WHEN ALL PHASES OF THE CONSTRUCTION FOR THIS PROJECT IS COMPLETED**	
E & D		
Land rights		
Monitoring		
O & M		
Total		

5. Item of Work

Item No.	Work	Est. Quant.	Unit	Est. Unit Price	Est. Amount	Bid Unit Price	Bid Amount	Final Quant.	Final Amount	% Over /Under
1	Mobilization and Demobilization	1	JOB	$30,000.00	$30,000.00	$193,950.00	$193,950.00	1	$193,950.00	0.0%
2	Pollution Control	1	JOB	$10,000.00	$10,000.00	$13,468.75	$13,468.75	1	$13,468.75	0.0%
3	Construction Surveying	1	JOB	$35,000.00	$35,000.00	$18,317.50	$18,317.50	1	$18,317.50	0.0%
4	Contractor Quality Control	1	JOB	$8,000.00	$8,000.00	$14,007.50	$14,007.50	1	$14,007.50	0.0%
5	Rock Riprap, R-400, West Reach, Sta. 0+00 - 50+00	33,500	TONS	$34.00	$1,139,000.00	$29.52	$988,920.00	28500	$841,320.00	-14.9%
6	Rock Riprap, R-400, West Reach, Sta. 50+00 - 110+85	41,000	TONS	$34.00	$1,394,000.00	$29.52	$1,210,320.00	39576	$1,168,283.52	-3.5%
7	Rock Riprap, R-400, East Reach, Sta. 6+54 - 26+57	(12,500 original)[1] 8900	TONS	$29.52	$236,020.00	$29.52	$236,020.00	13082	$386,180.64	47%
8	Geotextile, West Reach, Sta. 0+00 - 50+00	23,000	S.Y.	$5.00	$115,000.00	$5.82	$133,860.00	22422	$130,496.04	-2.5%
9	Geotextile, West Reach, Sta. 50+00 - 88+00	27,000	S.Y.	$5.00	$135,000.00	$5.82	$157,140.00	25681	$149,463.42	-4.9%
10	Geotextile, East Reach, Sta. 6+54 - 26+57	(12,500 original)[1] 9,800	S.Y.	$5.82	$57,036.00	$5.82	$57,036.00	9175	$53,398.50	-6.4%
11	Identification Markers or Plaques, Temporary Warning Signs	15	EA	$500.00	$7,500.00	$646.50	$9,697.50	15	$9,697.50	0.0%
12	Metal Fabrication, Settlement Plates	19	EA	$1,000.00	$19,000.00	$592.63	$11,259.97	19	$11,259.97	0.0%
13	Permanent Vegetation	1	JOB	$500.00	$500.00	$32,325.00	$32,325.00	1	$32,325.00	0.0%
			Total Estimate		**$3,380,500.00**	**Total Bid**	**$3,225,016.22**			

1 Original contract quantities reduced by modification #1. Percent over or under run computed from modified quantity.

Item No.	Work	Est. Quant.	Unit	Est. Unit Price	Est. Amount	Mod. Unit Price	Mod Amount	Final Quant.	Final Amount	% Over /Under
					Modification #3					
16	Identification Markers or Plaques, Temporary Warning Signs	18	EA	$646.50	$11,637.00	$1,011.33	$18,203.94	18	$18,203.94	0.0%
17	Change Location of spoil from access floatation channel	1	Job	$52,062.00	$52,062.00	$52,062.00	$52,062.00	1	$52,062.00	0.0%
							Total Modification #3		**$70,265.94**	
					Modification #5					
18	Rock Riprap, West Reach, Sta 113+35 – 131+34	5000	TONS	$29.52	$147,600.00	$29.52	$147,600.00	2509	$74,065.68	-49.8%
19	Geotextile, West Reach, Sta 113+35 – 131+50	3500	S.Y.	$5.82	$20,370.00	$5.82	$20,370.00	1862	$10,836.84	-46.8%
							Total Modification #5		**$84,902.52**	
							FINAL CONTRACT AMOUNT		**$3,177,336.80**	

Note: Mod #1 reduced CLIN 7 to 8,900 TONS and CLIN 10 to 9,800 S.Y.

6. Construction and Construction Oversight

Prime construction contractor	**Kesser International**
Subcontractor	**Pine Bluff Sand & Gravel** **Manson Gulf**
Original construction contract	**$3,225,016.22**
Change orders	**$ 155,168.46**
Over/Under runs	**$ - 202,847.88**
Final construction contract	**$3,177,336.80**

7. Major Equipment Used

71B Bucyrus Erie dragline on spud barge (placing geotextile and rock)
H185 DEMAG hydraulic excavator on spud barge (5 c.y. bucket placing rock)
4600 Manitowoc dragline on spud barge (excavating access floatation channel)
Marsh buggy excavator (spreading spoil)
Office barge
Tug boats
Various rock barges

8. Construction Sequence

The contractor began by excavating the floatation access channel at station 0+00 on the west reach at the GIWW and proceeded south to the cultural resource site near station 43+00. Once excavation had proceeded along this reach, the contractor began by placing the geotextile with the dragline and pinning the geotextile with a lift of rock riprap. The DEMAG excavator followed behind the dragline completing the rock riprap placement to the lines and grades. This process continued for the entire length of the west reach to the existing structure 12 at station 110+85. Upon completion of the west reach, the contractor repeated this process for the east reach starting at station 6+54 and proceeding to station 26+57.

When the east reach was completed the contractor returned to the area identified in modification #5 and placed the quantity of rock remaining on site. This rock was placed east of the existing structure #12 starting at station 113+35 and ending at station 117+62. No excavation for floatation access was performed on this segment.

When the placement of the rock riprap had been completed for the west reach from station 0+00 to 50+00, the contractor came back to this area and spread the spoil behind the rock revetment.

Due to problems encountered with placement of the spoil behind the rock revetment, a modification was executed to allow the contractor to place the excavated material adjacent to the channel and upon completion of the rock placement, pull the spoil back into the channel. This was done for the west reach from station 50+00 to 110+85 and for all of the east reach. This was the last work performed on the contract. Also while pulling the spoil back into the channel, the contractor seeded the spread spoil from station 0+00 to 50+00 of the west reach.

9. Contract Modifications & Field Changes

Modification #1: Reduced the length of rock riprap revetment placed on the east reach. The starting location of the revetment was moved from station 0+00 to station 6+54 due to land rights concerns. This ultimately reduced the quantity of rock riprap for bid item 7 from 12,500 tons to 8,900 tons and the quantity of geotextile for bid item 10 from 12,500 square yards to 9,800 square yards. This modification reduced the contract amount by $121,986.00.

Modification #2: Allowed the contractor to excavate for floatation access 24 hours per day 7 days per week, and also allowed for the placement of rock riprap for 10 hours per day, 7 days per week. Subsequently the contract performance time was reduced by 10 calendar days. The contract dollar value remained the same.

Modification #3: Changed the location of the access floatation spoil placement from behind the rock revetment on the outside of the channel from station 50+00 to station 110+85 of the west reach and all of the east reach. This modification was prosecuted because of the nature of the material in the access channel and concerns about the berm stability. The spoil in the above described reaches was pulled back into the access channels after construction of the rock revetment. Also 18 additional temporary warning signs were included in this modification. Modification #3 increased the contract amount by $70,265.94.

No modification #4 was issued.

Modification #5: Allowed the use of any rock remaining from the construction of the revetment of the east and west reaches to be placed on the east side of structure #12 from station 113+35 to 131+34. It was estimated at the time of execution of the modification that approximately 5000 tons of rock would be remaining; however only 2509 tons was ultimately available to be placed. Ultimately the cost for this modification was only the additional quantity of geotextile needed for this reach since the quantity of rock used was in the original contract amount (less the quantity removed by modification #1) and was placed at the original contract price.

10. Pipeline and Utility Crossings

Utility Type	Owner	Rep. To Contact
Pipeline	Texaco Pipelines LLC	Mr. Bruce Kraemer 15849 Old Spanish Trail Paradis, LA 70080 1-800-365-2748
Pipeline	Central Crude	Lake Charles Office (337) 436-1000
Pipeline	Greenhill Petroleum	(abandoned line)

11. Construction Safety

a. Employee was found using electrical extension cord with plug cut off and bare wire inserted in generator outlet.

b. Employees found using electrical extension cords with out being protected with a GFCI device.

c. Dragline operator replacing fuel filters on dragline without drip pan causing fuel to spill into engine compartment and on barge deck. Only one employee on barge at time filters were being changed.

d. There were mechanical problems with the Manitowac 4600 causing the boom to fall. One angle support on the boom had to be repaired and the Crane was re-certified.

12. Additional Comments

See attached NRCS Supplement

13. Significant Construction Dates:

Contract No. 50-7212-03-4	Date
Bid Opening	9/7/2002
Construction Contract Award	12/06/2002
Preconstruction Conference	1/21/2003
Notice to Proceed	1/28/2003
Mobilization	2/17/03
Construction Start	2/18/03
Construction Completion	7/7/2003
Final Acceptance	7/16/2003

Other significant Project Dates

	Date
Project Implementation closeout**	**This item will be completed when all phases of the project are constructed**
Start of Preconstruction Monitoring***	
Preconstruction Aerial Photography Acquisition***	
Monitoring Plan Completion***	

NRCS SUPPLEMENT TO COMPLETION REPORT

CONSTRUCTION SPECIFICATIONS

List any significant items in the construction specifications which caused problems, need clarification or changes for future contracts of this nature.

DESCRIPTION OF ITEM IN SPECIFICATIONS	RECOMMENDATIONS FOR FUTURE CONTRACTS
Excavation for floatation access damaging the berm...	Include language in the specifications that NO equipment will be allowed to work over the berm between the access channel and the rock dike unless it is floating at all times.
Settlement plates	Require that the settlement plates be constructed with a one piece vertical pipe without multiple sections and couplings. Recommend specifying that the length of the settlement pipe be 6' plus the rock fill height at the location planned. Also specify that if enough settlement occurs that the top of the pipe is less than 2' above the top of the rock, a minimum 2' section of pipe will be added.
Markings on Pilings	Put specific requirements in specifications to require that the treated piles are marked or branded to assure we are getting the correctly treated piles. Further investigation into industry standards for marking treated piles needs to be done.
Construction Surveys	Require the contractor to take interim and final x-sections of the work being constructed. Also, require the contractor to plot and submit to the government.

GENERAL COMMENTS

List any significant items which worked well and should be repeated or which caused problems, need clarification or changes for future contracts of this nature.

DESCRIPTION OF ITEM	RECOMMENDATIONS FOR FUTURE CONTRACTS
Placement of excavated material from flotation channel behind footprint of rock	If spoil is to be placed behind the rock dike, specify the maximum height of spoil placement **during construction** (not just at final acceptance) to prevent damage to existing marsh or foundation where rock will be placed. Also may want to require the use of two pieces of equipment (including a marsh buggy excavator) to double handle material and place it far enough away from the rock alignment to not present a problem.