

## **Annual Report Summary: Part 2, Performance Report**

**Period Covered:** January 1, 2002 to December 31, 2002  
**Date of Report:** January 24, 2003  
**EPA Number:** R83065101-0  
**Title:** Holocene sedimentary history of Weeks Bay, AL: human and natural impacts on deposition in a Gulf Coast estuary  
**Investigators:** Douglas Haywick, Miriam Fearn, David Allison, Keith Blackwell, Murlene Clark, Wayne Ispording, John Kempton, Lee Yokel  
**Institution:** University of South Alabama  
**Research category:** Regular grant

### **Changes in Scope or Objectives:**

There have been no major changes in the objectives of the grant since it was conceived in 1999; however, our failure to attract a qualified graduate student to do the sedimentological component of the study required utilization of more undergraduate students than first planned. We were also unable to secure a geophysical study of Weeks Bay (the original participant attached to the grant left the University of Alabama and no replacement was available). In order to compensate for the loss of geophysical data, we conducted more detailed radiometric dating of two cores\*. This was necessary to establish correlative time lines between the cores.

### **Comparison of Completed to Projected Research Progress:**

All coring was completed in the 2001-2002 project year. All sedimentological and paleoecological data has been collected, but the magnitude of this information has required prolonged interpretation and necessitated a no-cost extension of the grant. Masters candidate Chuck Stapleton will be submitting his thesis to the Department of Marine Science midway through 2003. The project is scheduled for completion by June 31, 2003.

### **Report of Expenditures to Date:**

<b>Item</b>	<b>Budget</b>	<b>Expenditure</b>	<b>Remaining</b>
<b>Personnel</b>	85,024	83,026	1,998
<b>Fringe Benefits</b>	10,073	8,448	1,625
<b>Materials/Supplies</b>	20,050	11,984	8,066
<b>Consultant/Contracts*</b>	23,650	26,695	-3,045
<b>Travel</b>	6,425	5,576	849
<b>Capital Expenses**</b>	0	1,985	-1,985
<b>Total Direct</b>	145,222	137,714	7,507
<b>FA Cost</b>	14,523	13,320	1,203
<b>Total Cost</b>	159,745	151,035	8,710

\* This expense includes a charge of approximately \$12,000.00 for additional radiometric dating of core materials. Funds were transferred into Contracts from Materials/Supplies.

\*\* \$1,985 was transferred from Personnel to Capital Expenses in order to replace a camera necessary for sedimentological examination (i.e., sedimentary petrography) of grain size fractions.

**Publications/Presentations (2002-2003):**

- Capello, S. and Haywick, D.W., 2002. Integration of undergraduate research with academic development of junior-level geology majors: a successful example from a liberal arts university in Alabama. *Geological Society of America National Meeting, Denver, October, 2002*
- Fearn, M., Hathorn, J., Stapleton, C., Sanders, J. and Haywick, D., 2002. Estuarine Paleocology: a study of Weeks Bay, Alabama. *Annual Meeting, American Association of Geographers, Los Angeles, CA Mar 19-23*
- Haywick, D.W., Fearn, M.L., Kempton, J.P. and Yokel, L.S., 2002. Holocene sedimentary fill in Weeks Bay Alabama: a 6000 year record of human- and storm-induced deposition in a United States Gulf Coast Estuary. *16<sup>th</sup> International Sedimentological Congress, July 8-12, Johannesburg, South Africa.*
- Stapleton, C.A., Fearn, M.L., Haywick, D.A., Sanders, J.M. 2002. Estuarine Paleocology: a study of Weeks Bay, Alabama. In *2002 Book of Abstracts, International Society for Diatom Research, 17<sup>th</sup> International Diatom Symposium, Ottawa, Canada.* (Same title, but different content from Fearn, et al. above).

**Copies of Presentations:**

Attached