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BI-MONTHLY PROGRESS REPORT NO. 1

TO: Mr. Barry S. Drucker, Physical Scientist, Contracting Officer's Technical Representative (COTR), U. S. Department of Interior Minerals Management Service (MMS), Sand and Gravel Program, 381 Elden St., Mail Stop 4010, Herndon, VA 20170-4817
CC: via email - Kim Zarillo, Contract Manager, S.E.A.
FROM: Dr. Jeff Reidenauer, Technical Program Manager, The Louis Berger Group, Inc. 30A Vreeland Road, Florham Park, NJ 07932
DATE: October 25, 2005
SUBJECT: Bi-Monthly Progress Report No. 1 for Contract No. 1435-01-05-CT-39075 Biological Characterization/Numerical Wave Model Analysis within Identified Borrow Sites Offshore the Northeast Coast of Florida

1. Summary of Work Accomplished and Progress Status of Project Items and Tasks

The contract award date was August 15, 2005. This report covers the period from August 15, 2005 to October 21, 2005.

- **Kickoff meeting and Item 1 (Task 1): Identification of Study Areas/coordination with local government, U.S. Army Corps of Engineers (ACOE), U.S. Geological Survey (USGS), and Florida Geological Survey (FGS)** – Information was gathered and synthesized from MMS, FGS, ACOE Jacksonville District, Florida Department of Environmental Protection (FDEP) and Volusia County's contractor for geotechnical investigation - Coastal Tech, Inc. Information was analyzed and discussed among Dr. Zarillo, Dan Phelps, PG, Dr. Reidenauer Technical Program Manager (TPM), and MMS COTR. During the kickoff meeting on September 12 and 13, 2005 the presentation by Mr. Phelps and follow-up discussion focused on selecting the fifth study site location. Based on information gathered and provided in advance B11 was chosen as the fifth study site (See Attachment 1). The other four study areas identified in the scope of work include: A4, A6, A8 and A9.

- **Item 2 (Task 2): Compilation and synthesis of existing biological and physical information** Key project personnel discussed the status of data collection for the proposed study sites. Existing information is in the process of being collected from Federal, state and local governments and private sector engineering firms. This task is in progress and approximately 65% complete.

- **Item 3 (Task 3): Program development to address biological and physical issues associated with the use of potential sand borrow areas offshore of the northeast**

coast of Florida -- A tentative schedule for the fall field event of October 2005, a subtask of Item 3 (Task 3), was discussed during the kickoff meeting. Issues with respect to vessel availability and changing fuel prices were also discussed. A spring field event is planned for May-June 2006. The Fall Field Event Cruise Plan was finalized for the October 17-25, 2005 cruise. However, the cruise was postponed due to the uncertain track of Hurricane Wilma. The field event is tentatively set to begin the week of October 25, 2005 using the M/V Thunderforce, a privately owned vessel docked in Ft. Pierce, FL.

Deliverables from Tasks 4, 5, and 6 will be divided into two categories technical and non-technical:

- **Item 4 (Task 4): Preparation of the Draft and Final Technical Manuscript and**
- **Item 5 (Task 5): Draft and Final Technical Summaries** – Drafts of various sections will be provided during Item 3 (Task 3) beginning February 2006. The complete draft is due April 2007.

- **Item 6 (Task 6) Submission of Draft and Final Non-Technical Summaries** -- Drafts of various sections will be provided during Item 3 (Task 3). Drafts of various sections will be provided throughout Item 3 (Task 3) beginning May 2006. The complete draft is due April 2007.

- **Item 7 (Task 7): Submission of Draft Scientific Paper and Paper to Refereed Journal** -- A draft scientific paper is due November 2007.

- **Item 8 (Task 8) Presentation at MMS Information Transfer Meeting or Other Scientific, or Technical Conferences, or Meetings –** An ITM or conference is planned for March 2008.

- **Item 9 (Task 9) Bi-Monthly Progress Reports –** This is Progress Report 1 of 16 to be completed over the 32 month contract.

- **Item 10 (Task 10) Presentation Slide Sets -** A draft slide set is due July 2007.

- **Item 11 (Task 11) Spatial Data Files –** Data files are due October 2007.

- **Item 12: Program Management and Control Requirements** -- The Technical Program Manager and/or Contract Manger maintains ongoing communication with the COTR and PIs. The Contract Manager is tracking costs and keeping within budget.

- **Item 13 Data Management** – The Contract Manager coordinated with PIs to complete a draft and final data management plan. The Data Management Plan for MMS Biological Characterization/Numerical Wave Model Analysis within Identified Borrow Sites Offshore the Northeast Coast of Florida Contract No. 1435-01-05-CT-39075 was completed in October 2005. The Contract Manager and TPM are coordinating ongoing data transfer.

2. Significant Problems Encountered

No significant problems have been encountered to date. An issue causing the most concern was late start date relative to the scheduled field event as proposed in the Technical Presentation. The amount of time for planning and organizing the first field event under Task 3 and collecting existing information under Task 1 was compressed in order to keep biological sampling within a time frame that correspond to the fall season. However, the Project Team was able to complete Item 1 (Task1); identification of study areas and plan the field event. The field event will occur in late October and early November 2005 due to hurricane Wilma.

3. Summary and Interpretation of Technical Findings

Analyses of the geological information from various sources concluded in the selection of the fifth study site for the project. Data sources included studies completed by the Florida Geological Survey (FGS) under a multi-year project conducted for MMS, work done by the Army Corp of Engineers –Jacksonville District, a Federal report by Meisburger and Field (1975), and Coastal Tech, Inc., Volusia County's engineering consultant.

During the kickoff meeting presentations and discussion focused on selecting the fifth study site location. Dr. Zarillo presented a brief review of the modeling process followed by Dan Phelps, PG, FGS - *Presentation* "Nassau and Duval Counties' Prospects". Dan Phelps, PG (Dan) presented "Nassau and Duval Counties' Prospects" the findings of multi-year studies conducted for MMS by the Florida Geological Survey (FGS) from 1997-2004. Mr. Phelps directed attention to the four (4) sites chosen for this Contract No. 1435-01-05-CT-39075 as defined in the scope of work. He reviewed the grain size data and thresholds of 5% fine material allowed for fill projects as set by Florida Department of Environmental Protection and 10% fine material set by the Jacksonville District Corp. Where data were available grain size of offshore samples were compared with native beach samples. He provided information on estimated sediment volumes using the two thresholds at the different sites. Agreement on B-11 as the fifth study site was concluded from the geological data available and knowledge that Volusia County intends to use B-11 as one source of beach renourishment material.

4. Summary of Significant Meetings

On September 12, 2005 a field trip was conducted to examples of natural and replenished beaches on Florida's east coast. On September 13, 2005 the kickoff meeting was held in Melbourne, FL at Florida Tech's Science Tower Conference Room. The kickoff meeting and workshop resulted in selection of the last study site and a review of the upcoming fall field event. A schedule of the major deliverables and tasks from August 2005 to April 2008 was provided.

5. Summary of Scheduled Work for the Next Two Months

Work will proceed on **Item 3 (Task 3).** The first field event will be completed between October and November 2005. Data collected from the event will be complied, and analysis of existing data collected for **Item 1 (Task 1)** will be provided. The Program Manager and PI's communicated with various contacts to obtain existing information. It may be necessary to meet with a few of these contacts to copy various data sets not available in electronic format or easily obtainable in print.

6. Summary of MMS Questions and Resolution

During the kickoff meeting three questions were asked:
1. How will borrow site cuts be determined for modeling purposes?
On B-11 the existing topography will be used for the pre-dredge model simulation and the "as built" cut will be used for the post-cut simulations. For sites without proposed dredge cuts Dr. Zarillo will design the cut according to examples of previous borrow cuts in the nearshore waters of east Florida and according to future needs for sand volume as projected by the appropriate county and federal project managers.

2. Is the equipment available for the field event? Dr. Reidenauer replied that the equipment was in order and available. SEA biologists Shenker and Barkaszi also have sampling equipment online for the field event.

3. The SEA-Team asked – What information is available on the known historical borrow site designs, actual dredged areas, and placement of dredge spoils in site A4? The COTR explained the lack of post-dredging data with respect to project plans submitted for permit applications. In the past a borrow cut was designed and approved by the Army Corp of Engineers. However, the dredging contractor may/may not have stayed with the bounds of the design, but instead may have worked the most convenient path for dredging operations. Since navigation data were not required, many of the earlier dredge sites cannot be accurately relocated.

Are there data on dredge spoil locations? There was some concern expressed by Dr. Jeff Reidenauer that dredge spoils may have been left in one of the study site areas (this turned out to be study area A5 which is located to the west of A4). This question arose during the review of previous investigations. The quality, volume and exact location of the spoils may or may not be verifiable.