

SUMMARY

When the oil came ashore during the spring/summer of 2010, the beaches had been eroded to historic levels due to a combination of a late 2009 hurricane (Hurricane Ida, Category #1, landfall just east of the delta on 10 Nov 2009), passage of numerous winter frontal systems, and heavy spring thunderstorm activity. Wave conditions became more tranquil by mid-summer and the stranded oil was quickly buried by sand that moved onshore. Searching for buried oil was a problem solved through the analysis of various datasets, determination of potential areas containing buried oil, and formulation of multipronged approach employing augering, shallow coring in the nearshore, and digging shallow pits to search for buried oil. Identification of the sampling sites was largely based on the analysis of beach profile data. Highlights of the beach profile program and the success in finding the remaining buried oil are summarized below:

- Beach profiles have been set-up on 11 barriers along 4 barrier arcs encompassing 112 profiles.
- Profiles were established during the Summer/Fall of 2010 and then surveyed every 1 to 2 months thereafter, as well as before and after major storms.
- The initial profile established the horizon along the beach coinciding with summer 2010 potential oil grounding.
- Overlays of the profiles were used to determine if storm events had eroded to the summer 2010 potential oil horizon.
- Both the Augering and Snorkel SCAT exploratory programs for buried oil were based largely on beach profile data. Sequential aerial photography also aided this effort.
- Augering employed a 10-m spacing along a grid system of parallel and perpendicular lines. Snorkel SCAT sampled along transects spaced 10 m apart.
- Both the augering and Snorkel SCAT programs were highly successful in locating buried SR mats onshore and in the nearshore as well as delineating areas that contained no buried oiled sediment.