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## *Interactive comment on* "Deepwater Horizon oil spill impacts on Alabama beaches" *by* J. S. Hayworth et al.

## Anonymous Referee #3

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This opinion paper offers reasonable detail and insightful comments on the DeepWater Horizon Incidence. The authors commented on official government statements, BP statements, and their own observations and opinions. The main goal of this paper is to identify "what is known and known to be unkown with regard to the current state of Alabama's beaches in the aftermath of the DeepWater Horizon disaster." Although the authors provided a certain level of details, I find that what is describe as known and unknown is still too general and largely qualitative. I argue that the biggest known unknown is the amounts that were washed onto the beaches and the amounts that were removed. In other words, I believe one of the most significant unkowns is the oil contamination budget. While the amounts of oil washed onto the beaches may be difficult to quantify, the amounts that were "removed" should be documented by the

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cleanup efforts. Little information is provided by the authors on the quantification of the removed amounts of oil contaminants. I challenge the authors to find more information on the amounts of removed oil.

## **Specific Comments:**

Page 6726 lines 15 to 20: "94 sediment samples were collected....". Figure 1 and later discussion indicated 20 samples. It is not clear whether 94 or 20 samples were collected from the study area. Regardless, this cannot be considered as a "large database of observational, semi-quantitative, and ....."

Page 6743, Figure 5: I cannot understand this figure.

Page 6728 and on, reference of figures: I think the figure numbers are wrong. For example, reference of "Fig. 6" should be "Fig. 7" and so on.

Page 6733 ling 15: "... are naturally low in organic content." It is not clear what is meant by this and what is the "low" referred to.

Page 6745 Fig. 7: the statement "..the thickness approximately 30 cm" is misleading. The photos shows a pile of oil remnants. The pile seems to be 30 cm high. This should not be explained as a 30-cm thick submerged mat material.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 8, 6721, 2011.