**End of Day Status report May 24 2010 RV Brooks McCall**

The presence of dispersed oil in the SW quadrant detected yesterday indicated that the plume may be tracking in a more westerly direction than in the previous two weeks. This prompted today’s strategy, which was to follow an arc between a due west trajectory and a SSW trajectory (from the spill site), but 2Km further from the source than yesterday’s samples. We started due west of the spill site at a radius of 3.5Km from the spill site, then moved to the WSW trajectory, also 3.5Km from the site. Each of these stations showed significant fluorescence signals between 1100 and 1300m, although both these traces were smaller than the corresponding samples taken yesterday 2Km out from the source. However, when we moved to the third station on the SW transect, 3,5Km from the source There was no significant fluorescence at any point in the water column. This was the first time since we began the monitoring on 5/15 effort that any station on the SW transect failed to show any fluorescence. For comparison the 16Km station on this transect sampled on 5/17 had a small but significant deep trace. From this negative result we concluded that a shift had occurred in the direction of the plume, most likely to the west. In light of this we back-tracked to the westerly transect and established the last station of the day due west of the spill site, approximately 5.5Km from the spill source. A significant fluorescence signal was detected at this station between 1100 and 1300m. Station specific information on samples taken today is shown in attachment 1, while graphic attachments 2 and 3 include sites visited on previous cruises, but with sampling stations from this cruise (4) highlighted in green. CTD data from this cruise are summarized in attachment 4.

A summary of particulate analyses (LISST) is shown in attachment 5. Correlation between LISST data and fluorometry remained good.

Samples from stations B42 (taken 5/23) and B46 and B48 (taken today) were selected for toxicity bioassay using the Rototoxkit M. Although results are not yet available, sample identifiers and depths are shown in the attached toxicity file (attachment 6).

Summary of Attachments

1. An Excel spreadsheet containing station specific information on samples.
2. A shape file of our station locations which can be imported to mapping software.
3. A pdf graphic based on the shape file showing our stations.
4. CTD plots for today's stations.
5. A summary of the LISST results.
6. Toxicity testing.

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