INCIDENT: OTCW Oil to Lake Michigan

LOCATION: Whiting Refinery Lakefront, IN
SUBJECT: Oiled Shoreline Assessment (SCAT) Report
DATE: 30th March 2014

SURVEY TEAM:

Name:	Organization:
Stephane Grenon	BP-OCC
Jeremy Thomas	USCG
Anne-Marie Borowski	USCG
Beverly Kush	EPA
Verneta Simon	EPA
Sean Kane	EPA-START

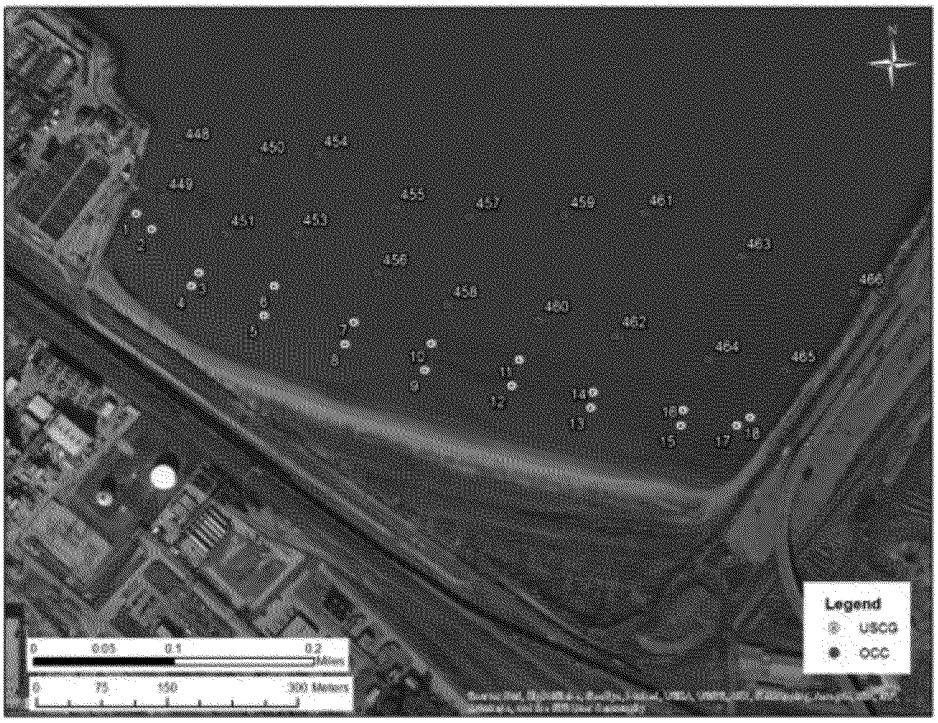
Summary of SCAT activities:

- SCAT conducted a sunken oil survey in the affected cove. No sunken oil or sheen was detected at any of the survey points (36 points) (see section below for details).
- SCAT conducted a shoreline survey of segments D-E-F. No significant changes in oiling conditions were observed since last survey (27th March).
- SCAT formulated the following recommendations:
    - Sweep shoreline once a day preferably in the afternoon;
    - Removal of the shredded absorbent boom on beach (segment E)
    - Removal of large pieces (larger than 2 inches) of shredded boom in rip rap area (segment F) only if easily accessible by clean up crew.
- The next SCAT survey will take place Thursday 3rd April (if weather permitting)

Sunken Oil Survey:

- SCAT conducted a sunken oil survey according to the agreed Sunken Oil Survey Plan.
- Weather was clear and wave conditions were appropriate for the observation of sheen on the water surface.
- ***No oil or sheen was observed at any of the 36 survey points.*** (see attached Excel spreadsheet for raw data)

Map showing sunken oil survey points



Oiling Observations:

SUMMARY

SEGMENT	SHORE TYPE	OBSERVED OILING
A	Coarse grain sand/gravel	28th - NOO
D	Rip Rap	NOO except for one 1 m sq patch of 1-10% tar balls, average 1-3 cm size, < 1 cm thick 27th – oiled band on the length of the segment 0.1 to 1.5 m wide, CT and 10-15% distribution 30th – no change
E	Sand, some shell hash	< 1% tar balls, average 0.5 to 1.0 cm size, < 1 cm thick 27th – no change 30th – no change
F	Pebble-cobble	1 tar ball per meter length, average 1-3 cm size, < 1 cm thick 26th: section of oiled boom stranded on the shoreline that requires removal. 27th: < 1% oil/pebble conglomerates typically 2-5 cm CT decreasing to north.

		30th – no change
G	Rip Rap	26th: NOO

SEGMENT A

- NOO (No Observed Oil) (survey conducted 28th March)

SEGMENT D

- NOO (No Observed Oil) on the sheet metal or rip rap material adjacent to the outfall based on observations from the walkway above the outfall and from the adjacent scaffolding that crosses down to the water line. (Note: the rip rap materials are very light in color which facilitated observations had any black oil been present on the outer surfaces of the rip rap). This observation was confirmed by the afternoon boat survey (March 26th).
- An area approximately 1 m square of 1-10% distribution of tar balls was observed at the most southern end of the rip rap at the junction with the sand beach of Segment E. The oil was a semi solid, shiny black COVER/COAT of 1-3 cm size tar balls. (COVER = 0.1-1.0 cm thick: COAT = <0.1 cm thick).
- 27th: oiled band exposed by lower water level along the segment varied 0.1 to 1.5 m wide, CT and 10-15% distribution: one small patch of silver sheen observed otherwise oil appeared stable and unlikely to be remobilized.
- 30th – no change

SEGMENT E

- Surface oil was observed at less than a 1% distribution of tar balls, the majority of which were 0.5-1.0 cm diameter with a maximum of 5 cm size.
- Similar low concentrations were observed in two small areas (several meters long) of shell hash.
- Many "false positives" were observed that included coal, wood, shell and vegetation.
- The fine sand size and the hard, frozen nature of the beach would not have been conducive to penetration or burial. Future surveys will include pitting to determine any presence of subsurface oil.
- 27th: no change < 1%
- 30th : no change <1%

SEGMENT F

- Surface oil tar balls were observed at a frequency of 1 per 1-m length (distribution <1%) on the pebble-cobble sediments. These tar balls were typically COAT thickness and in the 1-3 cm size range with an observed maximum of 10 cm.
- The pebble-cobble sediments were frozen with wave swash/spray so no penetration was likely.
- 26th: A section of 200' of oiled boom stranded on the shoreline was observed
- 27th: ground survey observed < 1% oil/pebble conglomerates typically 2-5 cm (one large 20cm size) typically CT, distribution decreased to north. Oiled boom was removed.
- 30th: no change

SEGMENT G

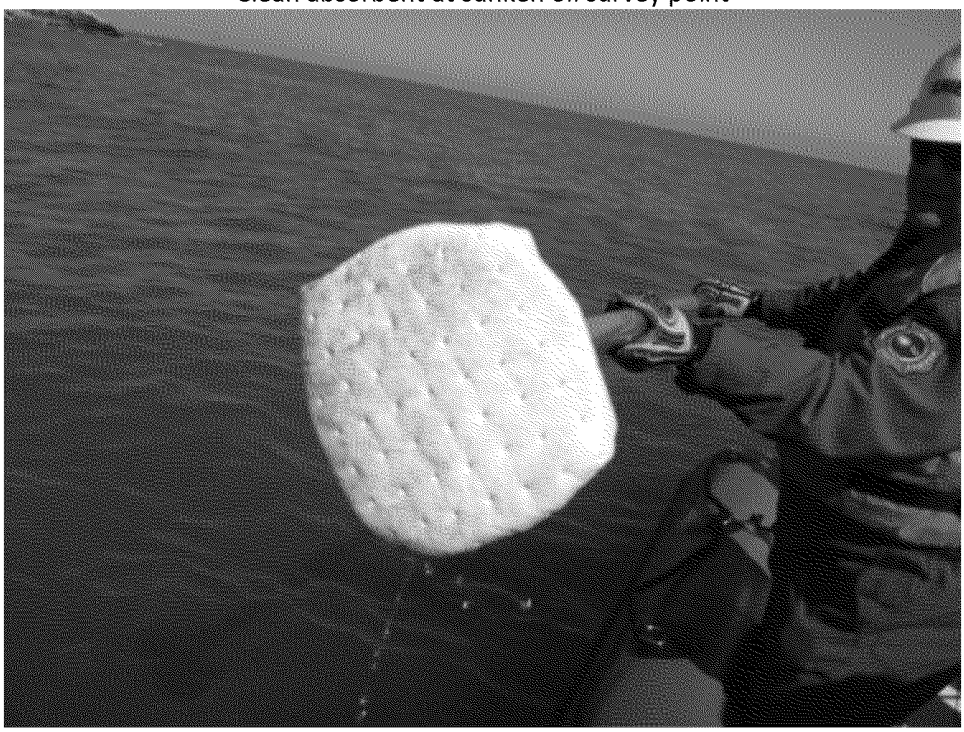
- 26th: NOO (No Observed Oil) on rip rap material. (Note: the rip rap materials are very light in color which facilitated observations had any black oil been present on the outer surfaces of the rip rap).

Future Activities:

- Thursday 3rd April: SCAT survey of segments D, E, F

Treatment Recommendations:

- Recommend the need for one small (approximately 5 person) shoreline cleanup crew.
- Recommended that the crew:
  - sweep the area within approximately 10 feet of the water line,
  - remove any oil larger than 1 inch that is accessible and that can be picked up by hand or with a shovel,
  - rake the two shell hash areas, spread out the shells, pick up oily clumps >1 inch size,
  - do not scrape oil from hard surfaces (rip rap material) or pebbles-cobbles,
  - Sweep shoreline once a day preferably in the afternoon;
  - Remove the shredded absorbent boom on beach (segment E)
  - Remove large pieces (larger than 2 inches) of shredded boom in rip rap area (segment F) only if easily accessible by clean up crew.
- No vehicles or night lights are recommended for use in Segment E for shoreline cleanup.
- Avoid foot traffic and all vehicle traffic in the vegetated areas (even if the plants appear "dead").
- Set aside the waste bags so that they can be inspected at the end of each day.

Photo:

Clean absorbent at sunken oil survey point