ARCADIS
Infrastructure, environment, facilities

Mayflower Pipeline Incident Response

Mayflower, Arkansas

Sheen Monitoring Report #39

Period: 07/14/2014 through 07/20/2014

Monitoring Days: 07/17/2014*

*Weekly sheen monitoring started on 03/11/2014.

Summary of Rainfall: A qualifying storm is defined as at least 0.25-inch rainfall in 3 hours and at least 72 hours since the previous qualifying storm.

Date	Maximum 3-hr Precipitation	Qualifying Storm
07/14/2014	0.21 inches	No
07/15/2014	0.00 inches	No
07/16/2014	0.00 inches	No
07/17/2014	0.22 inches	No**
07/18/2014	0.19 inches	No
07/19/2014	0.00 inches	No
07/20/2014	0.00 inches	No

**Weekly sheen monitoring and removal event was conducted on 07/17/2014.

Mitigation: Suspected petrogenic sheens were removed using absorbent materials.

Observations in Cove Inlet Channel:

- No sheen observed.

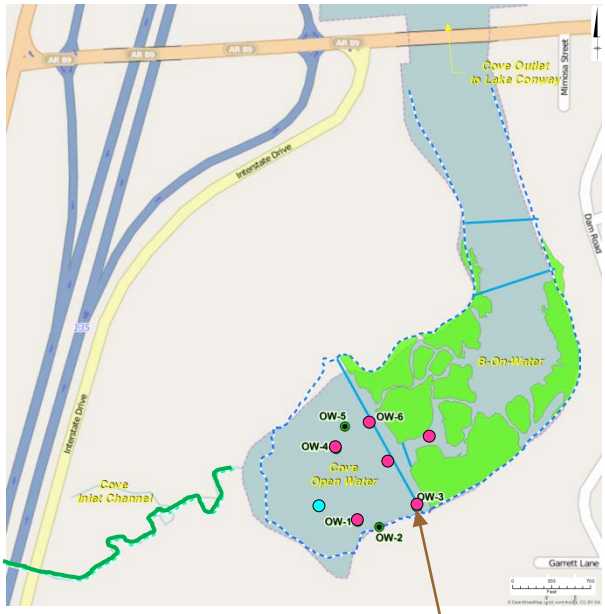
Observations in Cove:

- Two patches, one patch/streamer, and one streamer of silver gray sheen; and two patches/streamers of rainbow sheen observed. Sheens did not break when disturbed ("non-brittle")[1].
- One patch of silver gray sheen observed. Sheen broke apart when disturbed ("brittle")[2].

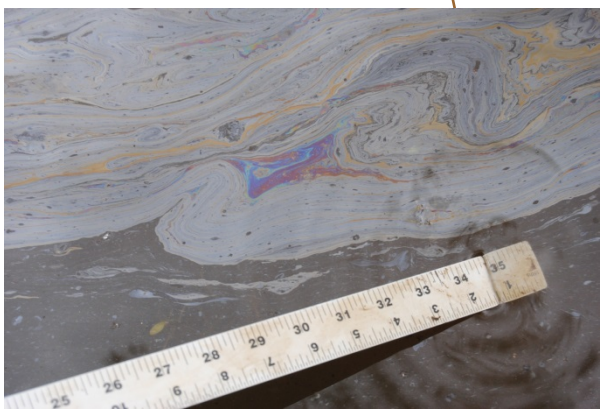
Path Forward for 07/21/2014 through 07/27/2014:

- Conduct sheen monitoring in Cove.

Legend:
Green Line – No Sheen
Aqua Circle – Brittle Sheen Location
Pink Circle – Non-Brittle Sheen Location
OW-1 – Shoreline Observation Location



Cove (Summary of Observations from 07/14/2014 through 07/20/2014)



Rainbow Sheen Patch/Streamer Observation on 07/17/2014

Notes:

1. Non-brittle sheens are often related to anthropogenic sources, including petrogenic sources (e.g., petroleum hydrocarbons).
2. Brittle sheens are often of natural biogenic origin.
3. Laboratory testing is required to distinguish sheen sources (e.g., crude oil, roadway runoff, natural biologic activity).
4. Sheen color (dark/metallic/rainbow/silver gray) and structure (patches/streamers/cover) terminology reference: NOAA 2007. NOAA Open Water Oil Identification Job Aid.