

Sheen Monitoring Report #44

Period: 08/18/2014 through 08/24/2014

Monitoring Days: 08/19/2014*

*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
08/18/2014	0.04 inches	No
08/19/2014	0.00 inches	No**
08/20/2014	0.00 inches	No
08/21/2014	0.00 inches	No
08/22/2014	0.01 inches	No
08/23/2014	0.00 inches	No
08/24/2014	0.00 inches	No

**The post-rainfall monitoring and removal event for the qualifying storm on 08/17/2014 was conducted on 08/19/2014 along with the weekly sheen monitoring.

Mitigation: Suspected petrogenic sheens were removed using absorbent materials.

Observations in Cove Inlet Channel:

- No sheen observed.

Observations in Cove:

- Three patches/streamers of rainbow/silver gray sheen (one with 0.25-inch wide oil spots); and one patch/streamer and two streamers of silver gray sheen observed. Sheens did not break when disturbed ("non-brittle")¹.
- One patch/cover (no particular structure) of silver gray sheen observed. Sheens broke apart when disturbed ("brittle")².
- One patch/streamer of non-brittle¹ and brittle² silver gray sheen observed (shown as non-brittle on the figure).

Path Forward for 08/25/2014 through 08/31/2014:

- Conduct sheen monitoring in Cove per the Construction Quality Assurance Plan (Appendix C of the Mitigation Action Plan approved by the ADEQ on July 8, 2014).

Notes:

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

Mayflower Pipeline Incident Response

Mayflower, Arkansas

Legend:

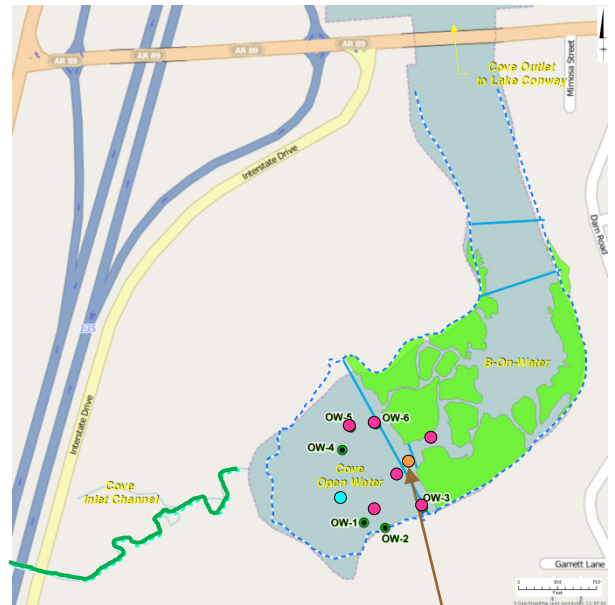
Green Line – No Sheen

Aqua Circle – Brittle Sheen Location

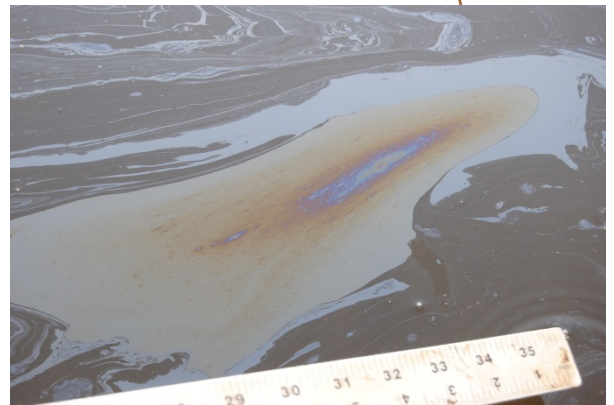
Pink Circle – Non-Brittle Sheen Location

Orange Circle – Non-Brittle Sheen Location with Oil Spot

OW-1 – Shoreline Observation Location



Cove (Summary of Observations from 08/18/2014 through 08/24/2014)



Rainbow/Silver Gray Sheen Patch/Streamer with Oil Spots (0.25-inch Wide) Observation on 08/19/2014