

Sheen Monitoring Report #9

Monitoring Period: Daily* from 12/16/2013 through 12/22/2013

*Heavy rain on 12/21/2013; no sheens observed.

Mitigation: Suspected petrogenic sheens were removed using absorbent materials.

Observations in Drainage Ways:

- A-Main
 - One streamer of metallic/rainbow sheens, one patch and one cover (no particular structure; with 0.05-inch wide oil spot) of rainbow sheens, and one streamer of metallic sheens observed. Sheens did not break when disturbed ("non-brittle")¹.
 - Three patches and one streamer of metallic sheens; and two covers (no particular structure) of rainbow sheens observed. Sheens broke apart when disturbed ("brittle")².
- A365W
 - Four patches of brittle² metallic sheens and two patches brittle² rainbow sheens of observed.
- A365E
 - One patch of brittle² metallic/silver gray sheens, two patches of brittle² metallic sheens, and one patch of brittle² rainbow sheens observed.

Observations in Dawson Cove Inlet Channel:

- Two streamers and one patch/streamer of non-brittle¹ metallic sheens; and two patches/streamers (one with 0.1-inch wide oil spots) and three covers (no particular structure; with 0.1-inch wide oil spots) of non-brittle¹ rainbow sheens observed.
- One patch of brittle² metallic/silver gray sheens, one patch of brittle² rainbow sheens, and one streamer of brittle² metallic sheens observed.

Notes:

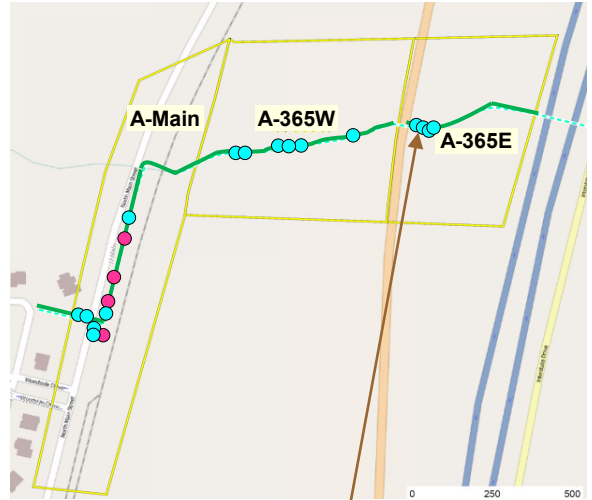
1. Non-brittle sheens are often related to anthropogenic sources, including petrogenic sources (e.g., petroleum hydrocarbons).
2. Brittle sheens are often of natural biogenic origin.
3. Laboratory testing is required to distinguish sheen sources (e.g., crude oil, roadway runoff, natural biogenic activity).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

Mayflower Pipeline Incident Response

Mayflower, Arkansas

Legend:

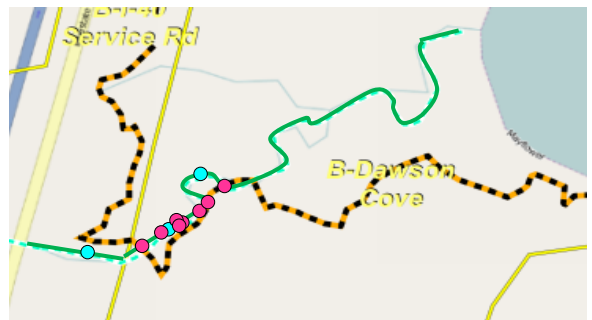
- Green Line – No Sheen
- Aqua Circle – "Brittle" Sheen Location
- Pink Circle – "Non-Brittle" Sheen Location



Drainage Ways (Summary of Observations from 12/16/2013 through 12/22/2013)



Metallic/Silver Gray Sheen Patch Observation on 12/16/2013



Dawson Cove Inlet Channel (Summary of Observations from 12/16/2013 through 12/22/2013)

Sheen Monitoring Report #9 (continued)

Mayflower, Arkansas

Monitoring Period: Daily from 12/16/2013 through 12/22/2013

Observations in Dawson Cove:

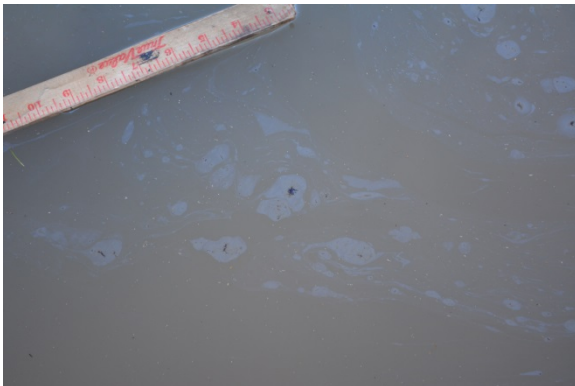
- One streamer and one patch/streamer (with 0.1-inch wide oil spots) of non-brittle¹ metallic/silver gray sheens; one patch/streamer of non-brittle¹ dark/metallic/rainbow sheen with 0.25-inch wide oil spots; one streamer of non-brittle¹ metallic/rainbow sheens with 0.1-inch wide oil spots; two streamers of non-brittle¹ dark/rainbow sheens with 0.1- and 0.25-inch wide oil spots; one streamer of non-brittle¹ dark/rainbow/silver gray sheens with 0.05-inch wide oil spots; and one patch of non-brittle¹ metallic sheens observed.
- Five streamers (three with 0.1-, 0.25-, and 0.5-inch wide oil spots), three patches (one with 0.25-inch wide oil spots), and two covers (no particular structure) of brittle² metallic sheens; and one patch, one streamer, one patch/streamer, and one cover (no particular structure) of brittle² rainbow sheens with 0.25- and 0.5-inch wide oil spots observed.

Legend:

- Aqua Circle – “Brittle” Sheen Location
- Pink Circle – “Non-Brittle” Sheen Location
- OW-1 – Shoreline Observation Location



Dawson Cove (Summary of Observations from 12/16/2013 through 12/22/2013)



Dark/Metallic/Rainbow Sheen Patch/Streamer with Small Oil Spots (0.25-inch Wide) Observation on 12/16/2013

Path Forward for 12/23/2013 to 12/29/2013:

- Continue sheen monitoring in all areas.

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.



Dark/Rainbow/Silver Gray Sheen Streamer with Small Oil Spots (0.05-inch Wide) Observation on 12/18/2013