

## Sheen Monitoring Report #13

# Mayflower Pipeline Incident Response

## Mayflower, Arkansas

**Monitoring Period:** Daily from 01/13/2014 through 01/19/2014

**Mitigation:** Suspected petrogenic sheens were removed using absorbent materials.

### Observations in Drainage Ways:

- A-Main
  - Two covers (no particular structure) and one patch of metallic/rainbow sheens; one patch and two covers of silver gray sheens; and one patch/streamer, one patch, and four covers of metallic/silver gray sheens observed. Sheens broke apart when disturbed ("brittle")<sup>1</sup>.
  - One streamer of metallic/rainbow sheens observed. Sheens did not break when disturbed ("non-brittle")<sup>2</sup>.
- A-365W
  - Three covers (no particular structure) and one patch of brittle<sup>1</sup> metallic/silver gray sheens observed.
  - One cover (no particular structure) of non-brittle<sup>2</sup> metallic/silver gray sheens observed.
- A-365E
  - Two covers (no particular structure) of brittle<sup>1</sup> metallic/silver gray sheens; and one cover and one patch of brittle<sup>1</sup> metallic/rainbow sheens observed.
  - One cover (no particular structure) of non-brittle<sup>2</sup> metallic/silver gray sheens and two covers of non-brittle<sup>2</sup> silver gray sheens observed.

### Observations in Dawson Cove Inlet Channel:

- Two patches of brittle<sup>1</sup> silver gray sheens; one cover (no particular structure) of brittle<sup>1</sup> rainbow sheens; one cover and one patch of brittle<sup>1</sup> metallic sheens; two covers of brittle<sup>1</sup> metallic/rainbow sheens; and one cover of brittle<sup>1</sup> metallic/rainbow/silver gray sheens observed.
- One patch/cover (no particular structure) of non-brittle<sup>2</sup> metallic/rainbow/silver gray sheens; one patch of non-brittle<sup>2</sup> silver gray sheens; and one cover and one cover/patch of non-brittle<sup>2</sup> metallic/silver gray sheens observed.

#### Notes:

1. Brittle sheens are often of natural biogenic origin.
2. Non-brittle sheens are often related to anthropogenic sources, including petrogenic sources (e.g., petroleum hydrocarbons).
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.

#### Legend:

Green Line – No Sheen

Aqua Circle – "Brittle" Sheen Location

Pink Circle – "Non-Brittle" Sheen Location



**Drainage Ways (Summary of Observations from 01/13/2014 through 01/19/2014)**



**Metallic/Silver Gray Sheen Cover/Patch Observation on 01/19/2014**



**Dawson Cove Inlet Channel (Summary of Observations from 01/13/2014 through 01/19/2014)**

## Sheen Monitoring Report #13 (continued)

Mayflower, Arkansas

**Monitoring Period:** Daily from 01/13/2014 through 01/19/2014

### Observations in Dawson Cove:

- One patch of brittle<sup>1</sup> rainbow/silver gray sheens and one streamer of brittle<sup>1</sup> silver gray sheens observed.
- Three streamers (one with 0.25-inch wide oil spot) of non-brittle<sup>2</sup> metallic/rainbow sheens; one streamer of non-brittle<sup>2</sup> dark/metallic/rainbow sheens (with 0.1-inch wide oil spots); one streamer of non-brittle<sup>2</sup> rainbow/silver gray sheens (with 0.1-inch wide oil spots); two patches/streamers of non-brittle<sup>2</sup> metallic/rainbow/silver gray sheens (with 0.1- and 0.25-inch wide oil spots); three streamers (two with 0.25- and 0.5-inch wide oil spots), one patch (with 0.5-inch wide oil spots), and one patch/streamer (with 0.25-inch wide oil spots) of non-brittle<sup>2</sup> silver gray sheens; one cover (no particular structure) and one streamer (with 0.25-inch wide oil spots) of non-brittle<sup>2</sup> metallic/silver gray sheens; and one patch of rainbow sheens (with 0.75-inch wide oil spots) observed.



**Dark/Metallic/Rainbow Sheen Streamer with Oil Spots (0.1-inch Wide) on 01/14/2014**

### Legend:

Aqua Circle – “Brittle” Sheen Location

Pink Circle – “Non-Brittle” Sheen Location

Orange Circle – “Non-Brittle” Sheen with Oil Spot Location

OW-1 – Shoreline Observation Location



**Dawson Cove (Summary of Observations from 01/13/2014 through 01/19/2014)**



**Rainbow Sheen Patch with Oil Spot (0.75-inch Wide) Observation on 01/16/2014**

### Path Forward for 01/20/2014 to 01/26/2014:

- Continue sheen monitoring in all areas.

### Notes:

1. Brittle sheens are often of natural biogenic origin.
2. Non-brittle sheens are often related to anthropogenic sources, including petrogenic sources (e.g., petroleum hydrocarbons).
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.