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Mayflower Pipeline Incident Response

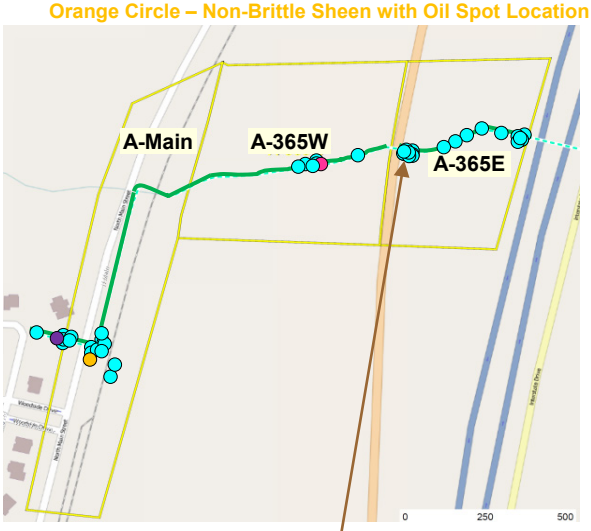
Sheen Monitoring Report #14

Mayflower, Arkansas

Monitoring Period: Daily from 01/20/2014 through 01/26/2014

Mitigation: Suspected petrogenic sheens were removed using absorbent materials.

Legend:
Green Line – No Sheen
Aqua Circle – Brittle Sheen Location
Pink Circle – Non-Brittle Sheen Location
Purple Circle – Brittle Sheen Location with Oil Spot
Orange Circle – Non-Brittle Sheen with Oil Spot Location



Drainage Ways (Summary of Observations from 01/20/2014 through 01/26/2014)

Observations in Drainage Ways:

- A-Main
  - Two covers (no particular structure) and one patch/cover of silver gray sheens; three patches, and three covers metallic sheens; three patches and four covers of metallic/silver gray sheens; and one patch of rainbow sheens with 0.2-inch wide oil spot observed. Sheens broke apart when disturbed ("brittle")[1].
  - One patch/cover (no particular structure) of metallic sheens with 0.1-inch wide oil spot observed. Sheens did not break when disturbed ("non-brittle")[2].
- A-365W
  - One cover (no particular structure) of brittle[1] silver gray sheens; one patch and two covers of brittle[1] metallic/silver gray sheens; and one cover and one patch of brittle[1] metallic sheens observed.
  - One patch of non-brittle[2] metallic/silver gray sheens observed.
- A-365E
  - One patch and five covers (no particular structure) of brittle[1] silver gray sheens; eight patches, three covers, and one cover/patch of brittle[1] metallic/silver gray sheens; one cover of brittle[1] metallic/rainbow sheens; and one cover of brittle[1] metallic sheens observed.

Metallic/Silver Gray Sheen Patch Observation on 01/22/2014

Observations in Dawson Cove Inlet Channel:

- Four covers (no particular structure) of brittle[1] silver gray sheens; four covers, two covers/patches, and two patches of brittle[1] metallic/silver gray sheens; one patch and two covers of brittle[1] metallic/rainbow sheens; and one patch and one cover of brittle[1] metallic sheens observed.
- Two patches of metallic/rainbow sheens and one patch of metallic/silver gray sheens observed within ice. Since non-brittle[2] sheens were previously observed in these areas, these sheens were assumed non-brittle[2].

Dawson Cove Inlet Channel (Summary of Observations from 01/20/2014 through 01/26/2014)

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.

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Sheen Monitoring Report #14 (continued)

Monitoring Period: Daily from 01/20/2014 through 01/26/2014

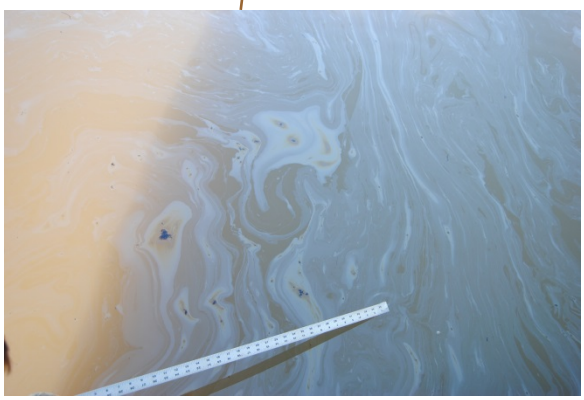
Observations in Dawson Cove:

- Two patches/streamers (with 0.1- to 0.75-inch wide oil spots), two patches, and two streamers (one with 0.25-inch wide oil spots) of non-brittle[2] silver gray sheens; one patch/streamer (with 0.1-inch wide oil spots) of non-brittle[2] rainbow/silver gray sheens; one patch/streamer (with 0.1- to 1-inch wide oil spots) and three streamers (one with 0.1-inch wide oil spots) of non-brittle[2] metallic/rainbow sheens; one patch/streamer of non-brittle[2] metallic/rainbow/silver gray sheens with 0.1- to 0.5-inch wide oil spots; and one patch/streamer of non-brittle[2] rainbow sheens with 0.05- to 0.5-inch wide oil spots observed.
- Two covers/streamers of non-brittle[2] silver gray sheens with 0.1- to 1.5-inch wide oil spots; and one patch/streamer of metallic/rainbow sheens with 0.1- to 0.5-inch wide oil spots observed within ice. Since non-brittle[2] sheens were previously observed in these areas, these sheens were assumed non-brittle[2].

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 01/20/2014 through 01/26/2014)

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



Silver Gray Sheen Patch/Streamer with Oil Spot (0.1- to 0.75-inch Wide) Observation on 01/20/2014

Path Forward for 01/27/2014 to 02/02/2014:

- 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.