ARCADIS
Infrastructure, environment, facilities

Mayflower Pipeline Incident Response

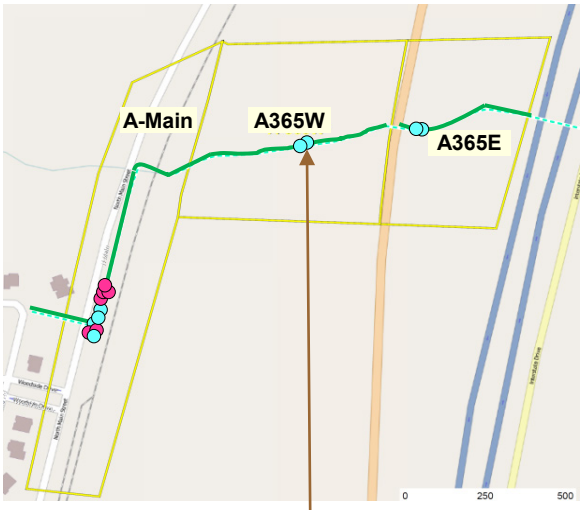
Mayflower, Arkansas

Sheen Monitoring Report #5

Monitoring Period: Daily from 11/18/2013 through 11/24/2013

Mitigation: Suspected petrogenic sheens were removed using absorbent materials.

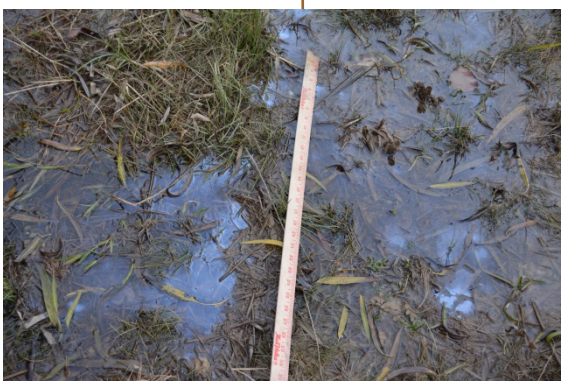
Legend:
Green Line – No Sheen
Aqua Circle – "Brittle" Sheen Location
Pink Circle – "Non-Brittle" Sheen Location



Drainage Ways (Summary of Observations from 11/18/2013 to 11/24/2013)

Observations in Drainage Ways:

- A-Main
  - One patch of metallic and silver gray sheens and three patches of metallic sheens observed. Sheens broke apart when disturbed ("brittle")[1].
  - One patch/streamer of metallic and silver gray sheens (blossoming and gold appearance); one streamer and one patch of rainbow sheens; and three patches of metallic sheens observed. Sheens did not break when disturbed ("non-brittle")[2].
- A365W
  - Two patches of brittle[1] metallic sheens observed.
- A365E
  - Two patches of brittle[1] metallic sheens observed.



Metallic Sheen Patch Observation on 11/19/2013

Observations in Dawson Cove Inlet Channel:

- Two patches of brittle[1] metallic sheens observed.
- One patch of non-brittle[2] rainbow/golden sheens observed.

Dawson Cove Inlet Channel (Summary of Observations from 11/18/2013 to 11/24/2013)

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.

ARCADIS
Infrastructure, environment, facilities

Mayflower Pipeline Incident Response

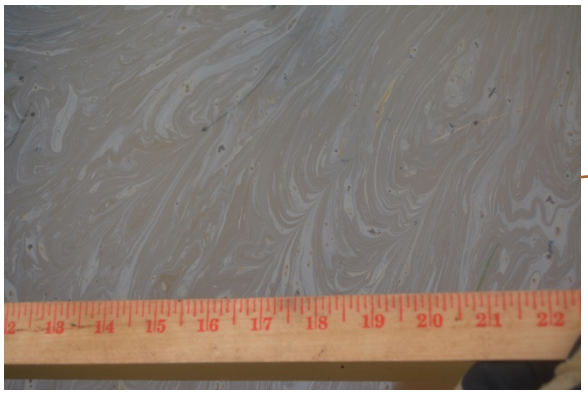
Mayflower, Arkansas

Sheen Monitoring Report #5 (continued)

Monitoring Period: Daily from 11/18/2013 through 11/24/2013

Observations in Dawson Cove:

- Four patches and one patch/streamer of brittle[1] metallic sheens; one patch/streamer of brittle[1] metallic/rainbow sheens, and three streamers of brittle[1] dark/metallic/rainbow sheens (with 0.25 to 1-inch wide small oil spots) observed.
- One patch/streamer (with small oil spots) and one streamer of non-brittle[2] metallic/rainbow sheens; one patch/streamer and one patch (with small oil spots) of non-brittle[2] metallic sheens; one patch/streamer of non-brittle[2] dark/metallic/rainbow sheens (with small oil spots); one streamer of non-brittle[2] dark/rainbow sheens (with small oil spots); and five patches/streamers (with small oil spots), two streamers (with small oil spots), and one patch of non-brittle[2] rainbow sheens observed. Observed oil spots were approximately 0.25-inch in width.



Rainbow Sheen Patch/Streamer with Small Oil Spots (0.25-inch Wide) Observation on 11/21/2013

Legend:
Aqua Circle – "Brittle" Sheen Location
Pink Circle – "Non-Brittle" Sheen Location
OW-1 – Shoreline Observation Location

Dawson Cove (Summary of Observations from 11/18/2013 to 11/24/2013)

Path Forward for 11/25/2013 to 12/01/2013:

- Continue sheen monitoring in all areas.

Dark/Metallic/Rainbow Sheen Streamer with Small Oil Spots (0.25-inch Wide) Observation on 11/20/2013

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.