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Mayflower Pipeline Incident Response

Mayflower, Arkansas

Sheen Monitoring Report #2

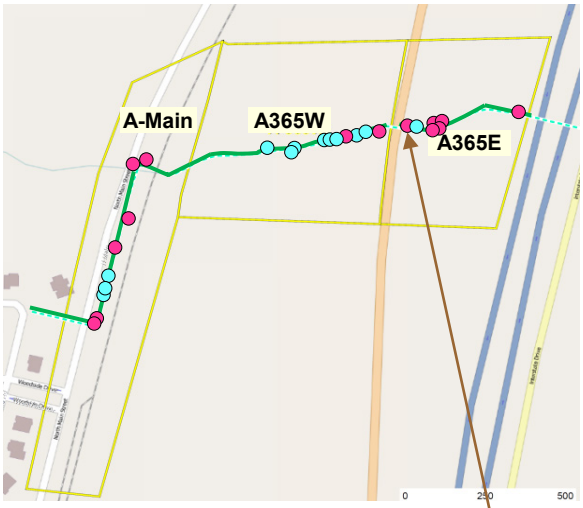
Monitoring Period: Daily from 10/28/2013 through 11/03/2013

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

Observations in Drainage Ways:

- A-Main
  - One patch of metallic/rainbow sheens and two patches of metallic sheens observed. Sheens broke apart when disturbed ("brittle")[1].
  - Two covers (no particular structure), three patches, and one streamer of metallic sheens observed. Sheens did not break when disturbed ("non-brittle")[2].
- A365W
  - One patch of brittle[1] metallic/rainbow sheens, five patches of brittle[1] metallic sheens, and two patches of brittle [2] rainbow sheens observed.
  - One streamer and one patch of non-brittle[2] metallic sheens observed.
- A365E
  - Four streamers and two covers (no particular structure) of non-brittle[2] metallic sheens observed.
  - One patch of brittle[2] metallic sheen observed.



Drainage Ways (Summary of Observations from 10/28/2013 to 11/3/2013)

Metallic Sheen Streamer Observation on 11/2/2013

Observations in Dawson Cove Inlet Channel:

- Three streamers of non-brittle[2] rainbow sheens, and five patches, one cover (no particular structure), and two streamers of non-brittle[2] metallic sheens observed. One streamer of rainbow sheen and one patch of metallic sheen were observed with some small oil spots.
- Four patches of brittle[1] metallic sheen observed.

Dawson Cove Inlet Channel (Summary of Observations from 10/28/2013 to 11/3/2013)

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) terminology reference: NOAA 2007. NOAA Open Water Oil Identification Job Aid.

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Mayflower Pipeline Incident Response

Sheen Monitoring Report #2 (continued)

Mayflower, Arkansas

Monitoring Period: Daily from 10/28/2013 through 11/03/2013

Observations in Dawson Cove:

- Three patches/streamers, three patches, and four streamers of non-brittle[2] rainbow sheens with some small oil spots; six streamers, four patches/streamers, and three patches of non-brittle[2] metallic sheens; three non-brittle[2] streamers of metallic/rainbow sheens; and patches of non-brittle[2] sheen with some oil spots observed. Brown sheens were observed in B-On Water area.
- One patch/streamer and two patches of brittle[1] metallic sheens and one patch of brittle[1] rainbow sheens observed.

Metallic Sheen Patches Observation on 11/3/2013

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

Dawson Cove (Summary of Observations from 10/28/2013 to 11/3/2013)

Path Forward for 11/4/2013 to 11/10/2013:

- Continue sheen monitoring in all areas.
- Review analytical results of sheen sampling when received (around 11/12/2013).

Brown Sheen Streamer Observation on 11/1/2013

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) terminology reference: NOAA 2007. NOAA Open Water Oil Identification Job Aid.