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Mayflower Pipeline Incident Response

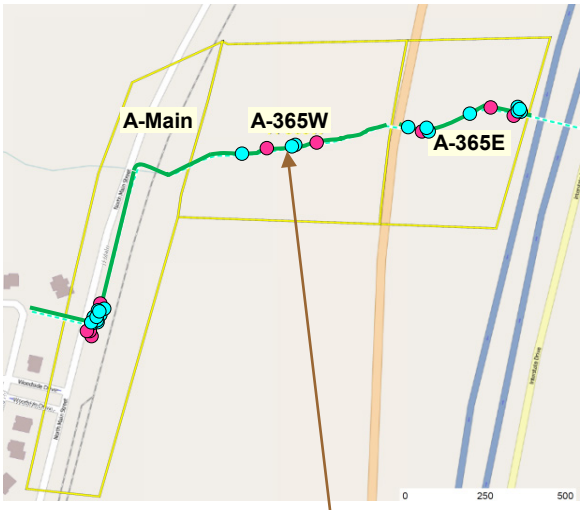
Mayflower, Arkansas

Sheen Monitoring Report #11

Monitoring Period: Daily from 12/30/2013 through 01/05/2014

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



Drainage Ways (Summary of Observations from 12/30/2013 through 01/05/2014)

Observations in Drainage Ways:

- A-Main
  - Three covers (no particular structure) and four patches of metallic sheens; and three covers (no particular structure) of rainbow sheens observed. Sheens broke apart when disturbed ("brittle")[1].
  - One patch and one cover (no particular structure) of rainbow sheens; and one patch and one cover (no particular structure) of metallic sheens observed. Sheens did not break when disturbed ("non-brittle")[2].
- A365W
  - Three patches of brittle[1] metallic sheens observed.
  - Two patches of non-brittle[2] rainbow sheens observed.
- A365E
  - Five patches and two covers (no particular structure) of brittle[1] metallic sheens; and one cover (no particular structure) of brittle[1] rainbow sheens observed.
  - Two patches (one with 0.1-inch wide oil spot) and one cover (no particular structure) of non-brittle[2] rainbow sheens observed.

Metallic Sheen Patch Observation on 01/04/2014

Observations in Dawson Cove Inlet Channel:

- Two covers (no particular structure) and two patches of brittle[1] metallic sheens observed.
- One patch (with 0.25-inch wide oil spot), seven streamers (six with 0.1-inch wide oil spots), one cover (no particular structure), and two patches/streamers (one with 0.1-inch wide oil spots) of non-brittle[2] rainbow sheens; and two patches and one cover (no particular structure) of non-brittle[2] metallic sheens observed.

Dawson Cove Inlet Channel (Summary of Observations from 12/30/2013 through 01/05/2014)

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 #11 (continued)

Monitoring Period: Daily from 12/30/2013 through 01/05/2014

Observations in Dawson Cove:

- One patch of brittle[1] metallic sheens observed.
- Thirteen streamers of non-brittle[2] rainbow sheens with small oil spots (nine with 0.25-inch, three with 0.1-inch, and one with 0.75-inch wide oil spots) observed.

Rainbow Sheen Streamer with Small Oil Spot (0.25-inch Wide) Observation on 12/31/2013

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

Dawson Cove (Summary of Observations from 12/30/2013 through 01/05/2014)

Path Forward for 01/06/2014 to 01/12/2014:

- Continue sheen monitoring in all areas.

Rainbow Sheen Streamer with Small Oil Spots (0.1-inch Wide) Observation on 01/02/2014

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.