ExxonMobil Mayflower Oil Spill

20 inch pipeline rupture in Northwoods Subdivision
Mayflower, Faulkner County, Arkansas
ADEM Report to EPA Phone Duty Officer @ 1605 3/29/13

1507 Incident # 12713

Pipe Line Event Faulkner Co

Local Coordinator reported an Exxon crude oil pipeline has been ruptured at 44 Starlite Road North in Mayflower. The release of crude oil is ongoing at this time. Rate of flow is unknown. Approximately 50-60 homes have been affected as well as a release into Lake Conway. No evacuations have been made. Residents are sheltering in place at this time. Faulkner County Judge has verbally declared. Conway and Pulaski County Hazmat Teams are in route as well as a response crew from Exxon.
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NRC Reports

• NRC # 1042466 taken at 1706, March 29, 2013
  ExxonMobil Pipeline Company reported a pressure drop in a subsurface pipeline with an unknown amount of discharged crude oil at 1315
  No damages or closures reported at this time
  OSRO in route to scene

• NRC # 1042476 taken at 1904, March 29, 2013
  ExxonMobil Pipeline Company reported the incident may be a significant material release with an unknown amount of discharged crude oil
  Under Damages, an evacuation was reported at this time
  Shutdown system and all the valves are closed
  Release has not been secured, and release duration is 3 hours
Initial Emergency Response Actions taken by Faulkner County and City of Mayflower—What was happening on the ground

Evacuation of residents in the Northwood Subdivision

Blocked culverts into the main body of Lake Conway

Installation of dikes and underflow dams along the main drainage area from the spill location to the Lake Conway cove area

*These actions limited the environmental impact to a localized area
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Actions Taken

- EPA Phone Duty Officer activated EPA Response Duty FOSC
- EPA FOSC contacted ADEM
- EPA FOSC contacted ADEQ & Local Emergency Manager
- EPA FOSC activated EPA START and deployed
- EPA FOSC arrived on site at 2230
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Organization – On Scene

- Mayor of Mayflower
- County Emergency Manager
- Faulkner County Judge
- Mayflower Fire Chief
- Mayflower Streets Dept
- ExxonMobil Pipeline Company
- ADEQ
- ADEM
- USEPA
- USDOT
ExxonMobil Mayflower Oil Spill Assessment

• FOSC Brescia conducted a site walk with ExxonMobil Pipeline President, Faulkner County Judge, and ADEQ SOSC from the source location to the cove of Lake Conway and determined the spill to be a Major

• Approximately 62 homes in the Northwoods Subdivision had been evacuated due to the release (Initial detections of VOCs and Benzene Exceeded Public Health Levels in multiple locations at the source and collection sites)

• ExxonMobil had cleanup contractors on site conducting vacuum operations at multiple pooled oil locations, deploying boom, and had ordered in additional cleanup contractors along with the ExxonMobil North American Regional Response Team (NARRT)

• Initial estimates provided to the USEPA FOSC by ExxonMobil was that approximately 2,000 bbls had been released, however the amount was believed to be larger and would be staffed accordingly
ExxonMobil and USEPA START conducted stationary and roving air monitoring at the source location, within the neighborhood, and at multiple locations along the spill pathway. This began after the spill occurred and continued until levels remained below Public Health Action Levels.

As part of the Unified Command Home Residential Re-entry Plan, ExxonMobil and USEPA START have offered to provide air sampling to the 22 homes in the impacted area of the Northwoods Subdivision. Currently, 13 homes have been sampled. DOH then reviews the results and meets with the resident to discuss analyses. Once house is clear, resident can return. Currently 22 homes are still evacuated.
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Source Location between two houses in Northwoods Subdivision

Oil migrated from source down North Starlite Rd
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Oil migrated behind homes and between homes on North Starlite Rd

Oil migrated down North Starlite Rd
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Oil behind homes on North Starlite Rd

Oil migrated into drainage ditch, under Main Street and into a ditch
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Oil migrated from the ditch into an unnamed creek

Oil migrated from the unnamed creek under State Highway 365, under Interstate I-40 West
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Oil migrated under I-40 West into the Cove of Lake Conway

Oil migrated into Cove of Lake Conway
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Impacted Cove

Impacted Cove
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ICS/Unified Command Stood Up

• ICS/Unified Command stood up at the Mayflower City Hall Office within the first 12 hours of the spill

• Unified Command consisted of:
USEPA/ADEQ/Faulkner County/ExxonMobil

• Initial ICS 201 created with objectives for 24 hr Ops period, IAP created within 3 days

• ExxonMobil began ordering additional resources (vacuum trucks, frak tanks, hard and soft boom/pads, skimmers, cleanup personnel, etc), NARRT en-route
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Peak of Response-On the Ground

Personnel on Site (**250 in Command Post*/ **440 in Field**)
• 1 USEPA FOSC, 2 USEPA PSCs, 2 USEPA OSCs, 1 EPA PIO
• 1 ADEQ SOSC, (15 State Personnel including ADEQ, ADOH, Arkansas Game &Fish)
• 1 LOSC (Faulkner County Judge)
• 28 City of Mayflower Personnel (Fire Dept/Police Dept/Streets/Public Works)
• 1 USDOT
• 1 USFWS
• **663** ExxonMobil personnel and contractors (ExxonMobil NARRT and Contractors)

ExxonMobil Assets on Site (**Not including vessels, marsh equipment, etc.**)
• **23** Vacum Trucks
• **85** Frac tanks
• **9,593 ft** Hard Boom
• **241,290 Soft Boom**
ExxonMobil estimates 5,000 bbls released
Oil/Water Recovered: 28,489 bbls

Roll Off Box Totals:

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ExxonMobil Mayflower Spill
Neighborhood Cleanup

• Vacuumed free oil (surface and sub-surface)
• Pressure washing of impacted roads
• Excavation of oiled trees and impacted soil
• Removal and replacement of storm drain, water lines, driveways, asphalt, etc.
• Removal of the damaged pipeline
• Removal of oiled HVAC systems and electrical conduit
• Planned removal of impacted soil under foundations
• ExxonMobil offered residential buyout for the Northwoods subdivision
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Neighborhood Cleanup

Excavated soil around foundations of homes

Excavation of Storm Water line along North Starlite Rd
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Cove of Lake Conway Cleanup

• Utilization of Vacuum trucks to remove free oil on water
• Utilization of skimmers, absorbent pads/boom
• Utilization of hard boom and skirts to contain oil to sections
• Utilization of Marsh Equipment for removal of oiled vegetation/soil
• Utilization of water flushing methods to remove residual oil from soil/sediment
• Utilization of wood chippers to reduce oiled vegetation waste
• Utilization of pumps to regulate water in cove for rain events and for cleanup purposes
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Cove of Lake Conway Cleanup

Cleanup along North Side
Cleanup along South Side
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Cove of Lake Conway Cleanup

Marsh Operations removing oiled vegetation

Marsh Operations using hard and soft boom
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Federal Funding

FPN Ceiling: $600,000

PRFA issued to USFWS for $17,500, this was essential to assist state wildlife agencies with a spill this size.
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Challenges

• Sequestration impacted how USEPA managed resources

• Joint Information Center was needed at the beginning to be staffed from the State and Federal level at a more accessible location for media

• Complex/Tedious cleanup techniques required due to foundations and utilities in neighborhood areas

• Amount of waste generated and limited staging areas in Mayflower
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Challenges

• Home Re-entry Plan: Scheduling with residents for the process including indoor air sampling and the delay time for results to be validated and reviewed

• Multiple agencies involved and the coordination between them for sampling, reviewing results, conveying to residents, and etc.

• Public meeting coordination and uniform media access

• State Agency operating outside of the Unified Command structure conducting independent sampling activities (Arkansas Attorney General Office)
ExxonMobil Mayflower Oil Spill Lessons Learned

• An established ICS/Unified Command is essential between all agencies and the RP for a successful response

• A Local On Scene Coordinator (County Judge/etc) within Unified Command is essential and critical to ensure the impacts to the community are being addressed in a timely manner
• Special Thanks to Faulkner County Judge Alan Dodson for assisting in the response efforts and for being engaged daily for the people of Faulkner County, Arkansas

• Special Thanks to ADEQ SOSC Dean Vanderoff for assisting in the response effort and for assisting the USEPA FOSC on all state issues

• Special Thanks to the USEPA Region 6 OSCs that assisted in providing oversight in this response (Rhotenberry, Mason, McAteer, Smith, Martin, Leos, Todd)
Cove of Lake Conway
Final Site Walk completed May 22, 2013

Cove three weeks ago

Cove today