Enbridge Line 6B Incident

Public Update and Availability Session

October 14, 2010
(Day 81)
Oil coming out of culvert on Talmadge Creek on first day of spill, July 26, 2010.
Exposed pipeline during the first week of the oil spill response.
Initial cleanup of a 5-acre contaminated zone in the pipeline break area. Photo shows a dewatering operation.
Second week of contaminated soil cleanup near the pipeline break.
After four weeks, contaminated land located by the pipeline break was backfilled with clean soil.
Restored and re-vegetated pipeline break area on Oct. 11, 2010.
Talmadge Creek day one: creek and floodplain completely oil-covered.
Initial containment measure in the creek includes skimmers, containment booms, and siphon dams.
Surface water was reduced to heavy sheen by the end of the response’s first week.
To access the creek in order to remove contaminated soil, swamp mat roads were established. Note white oil pads placed to absorb oil.
Talmadge Creek after soil scraping was completed. Contaminated soil staging pads visible on the right side of the picture.
Talmadge Creek following restoration, which included soil backfilling, coconut matting, vegetation seeding, and silt fencing.
Kalamazoo River on July 26, 2010, day one of the response: oil covered the river from bank to bank.
Within one week, presence of heavy oil reduced to a sheen.
In August 2010, most sheen production came from contaminated vegetation on the riverbanks and islands.
Example of sheening during week two and three of the response.
By mid-August, all contaminated islands were contained.
Some islands required soil removal.
Ceresco Dam
Division C
July 26, 2010, Ceresco Dam: note the oil flowing over the dam.
By the end of the first week, oil reduced to a heavy sheen.
Oil caught in backwater vegetation just upstream from Ceresco Dam.
Containment booming established to control vegetation sheening upstream of Ceresco Dam.
October 2010: submerged oil cleanup started upstream of Ceresco Dam.
Condition of stream bank just downstream of Ceresco Dam in late July 2010.
Same location, late September 2010.
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Operational Update

October 14, 2010
Today’s Statistics

- Personnel on site: 1,166
- Oil / water collected: 12.3 million gallons
- Soil / Debris collected: 83,000 cubic yards
- Boom in water: 109,800 feet
- Dredging water treated: 6.1 million gallons
Monitoring
Sampling and Assessment
Containment
Contamination Recovery
Staging
Disposal
Shoreline Cleanup
Airlifting excavation equipment into an inaccessible floodplain.
Excavation of floodplain contamination & staging of one-ton waste bags.

Division C MP11.25, Airlift Staging
Decontamination of containment boom.
Decontamination of containment boom.
Submerged Oil

Dredging at Ceresco Dam
Ceresco Dam dredging operation and submerged oil aeration cells along the north bank.
Amphibex dredge used to remove approximately 18 inches of sediment from upstream of Ceresco Dam.
Geotube filter system used to capture contaminated sediment.
Ceresco Dam dredging progress as of Oct. 12, 2010: green indicates completed areas and blue shows areas in progress.
Submerged Oil
Aeration, Flushing, Agitation
Submerged oil recovery at “Mill Pond Area” in Battle Creek.
Example of submerged oil aeration, flushing, and recovery. Sediment is agitated to reintroduce oil to the surface so it can be collected.
Operation and Maintenance
Long Term Activity
Riverbank flushing activities.
Riverbank restoration and long-term containment. Some areas on river will be monitored over time for potential contamination.
Residual contamination on islands will be monitored over time.
Stains on trees and rocks will fade over time and do not present health or environmental risks.

Other areas will require long-term operation and maintenance to continue to reduce contamination levels.
Long Term Monitoring

- **Groundwater & Drinking water**
  - Substantial sampling and monitoring in residential wells
    - Analysis
      - Oil specific organic compounds
      - Oil specific inorganic compounds
      - Non oil related water quality

- **Hydrogeologic Assessment**
  - Study the dynamics of water flow
  - Study chemical compounds of concern

- **Results of both assessments due by October 31, 2010**
  - Long term monitoring plan based on findings
Issues Conveyed to Unified Command

- Drinking water
- Health impacts
- Property values
- Who should I talk to?
- Recreational use of the Kalamazoo River
- Claims