



Summary of Incident

- On August 15, 2019 at approximately 8am MT, Bonterra identified an imbalance and began investigation.
- At approximately 1pm, discovered that an emulsion pipeline (17170-1) situated on its leased lands had ruptured resulting in a release of emulsion of an estimated 40 m3 into Washout Creek. Bonterra immediately activated its Emergency Response Plan, including immediate containment procedures and mitigation plans associated with minimizing impact, as well as notification of all appropriate parties.

Immediate Containment, Recovery and Monitoring

- Over 600 ft of booms were deployed across multiple locations (6-10) to contain and recover released fluids with the use of vac units. In addition, in areas not accessible by vehicle traffic, helicopters with barrel skimmers will be deployed to recover released fluids. Disposal of recovered fluids will be transported to an approved treatment, recovery, and disposal (TRD) facility.
- Plans have been put in place to mitigate the effect on wildlife, including setting up barriers, visual deterrents and physical human presence.
- Clean up and recovery is expected to continue for the next three weeks. The first week will involve intense recovery efforts as outlined above, while the following two weeks will include shoreline monitoring.
- Continuous monitoring and sampling to assess the ongoing effect of the release.

SUMMARY OF DAILY OPERATIONS (24 HOURS)

BONTERRA August 24

Recovered emulsion from the creek utilizing river booms and removed the collected emulsion with vac trucks. Completed shoreline clean-up work starting upstream and working downstream into the boom sets. Recovered oil released from the shoreline clean-up in the river booms, removed collected oil with barrel vacs and disposed of at an approved treatment, recovery, and disposal (TRD) facility. Optimized existing booms to increase emulsion-catching efficiency

Have recovered all bulk oil with trace residual amounts to be cleaned up over the coming two to three weeks. The incident has been de-escalated by both AER and Bonterra.

Containment, Recovery and Monitoring

- Over 1500 ft of booms have been installed across multiple locations on the creek to contain and recover released fluids with the use of vac units and three drum vacuum units at particular locations on the creek. Completed impacted fluid recovery operations at various locations along Washout Creek Recovered fluids were transported to an approved treatment, recovery, and disposal (TRD) facility for disposal.
- Removed/recovered free product and oily vegetation from bank of watercourse.
- Washed cobble and oiled logs and recovered product via portable vac units.



- Wildlife deterrents were moved and re-positioned throughout the day. Live traps for the identified Beaver were staged and will be set when necessary. Current work activities in the area are acting as active hazing. No other signs of wildlife in the watercourse were identified.
- Continuous monitoring and sampling to assess the ongoing effect of the release.

EXPECTED OPERATIONS FOR NEXT 24 HOURS

- All free-standing oil has been removed.
- Continue to maintain, monitor containment boom within Washout Creek.
- Complete shoreline clean-up work starting upstream and working downstream into the boom sets. Recover oil released from the shoreline clean up in the river booms, remove the collected oil with barrel vacs and dispose at approved treatment, recovery, and disposal (TRD) facility.
- Helicopter will arrive in the mornings to remove full solid bags to the staging area and set out new supplies for the shoreline clean-up crews.
- Remove one river boom at a bridge.
- Deploy / maintain wildlife deterrents as required.
- Continue wildlife monitoring.
- Conduct recovery/remediation operations.
- Collect surface water samples every three days as per monitoring plan.