A 1997 environmental site assessment supported by the Railroad Commission of Texas (RRC) estimated the subsurface position of a crude-oil spill discharging to a coastal creek (Dutton and others, 2002). The assessment included an estimate of the volume of oil in place in the plume (~12,300 bbl) and suggested a number of remediation alternatives. Additional investigations largely verified the findings of the 1997 site assessment and developed a final remedial design. The remedial design was to install a barrier to prevent oil from discharging to the creek and includes long-term periodic maintenance to remove oil that accumulates in the interception trench. The remediation was begun in 2000; by 2004 about ~295 bbl of oil had been removed.

The objectives of the proposed student project are to:

- Obtain details on annual or quarterly volume of oil removed from the site and evaluate whether discharge been steady or has it been going down
- Reconcile the remediation production trends with the conceptual model of the oil plume, and any other new data
- Obtain data on how much State money has been spent to date on assessment and remediation
- Evaluate whether the remediation approach is proving cost-effective in terms of to-date and projected costs.

As part of this study, the MORE Science student will learn about groundwater hydrology, contaminant site assessment, soil-vapor surveys and other site investigation techniques, and various approaches for groundwater and site remediation. There is potential for the student’s report, submitted to the RRC, to influence the future direction of remediation at this site.

Citation: