

Bailey Waste Disposal (UD#2 VI-5)
Bridge City, Texas
30 June 1985

Location and Nature of Site

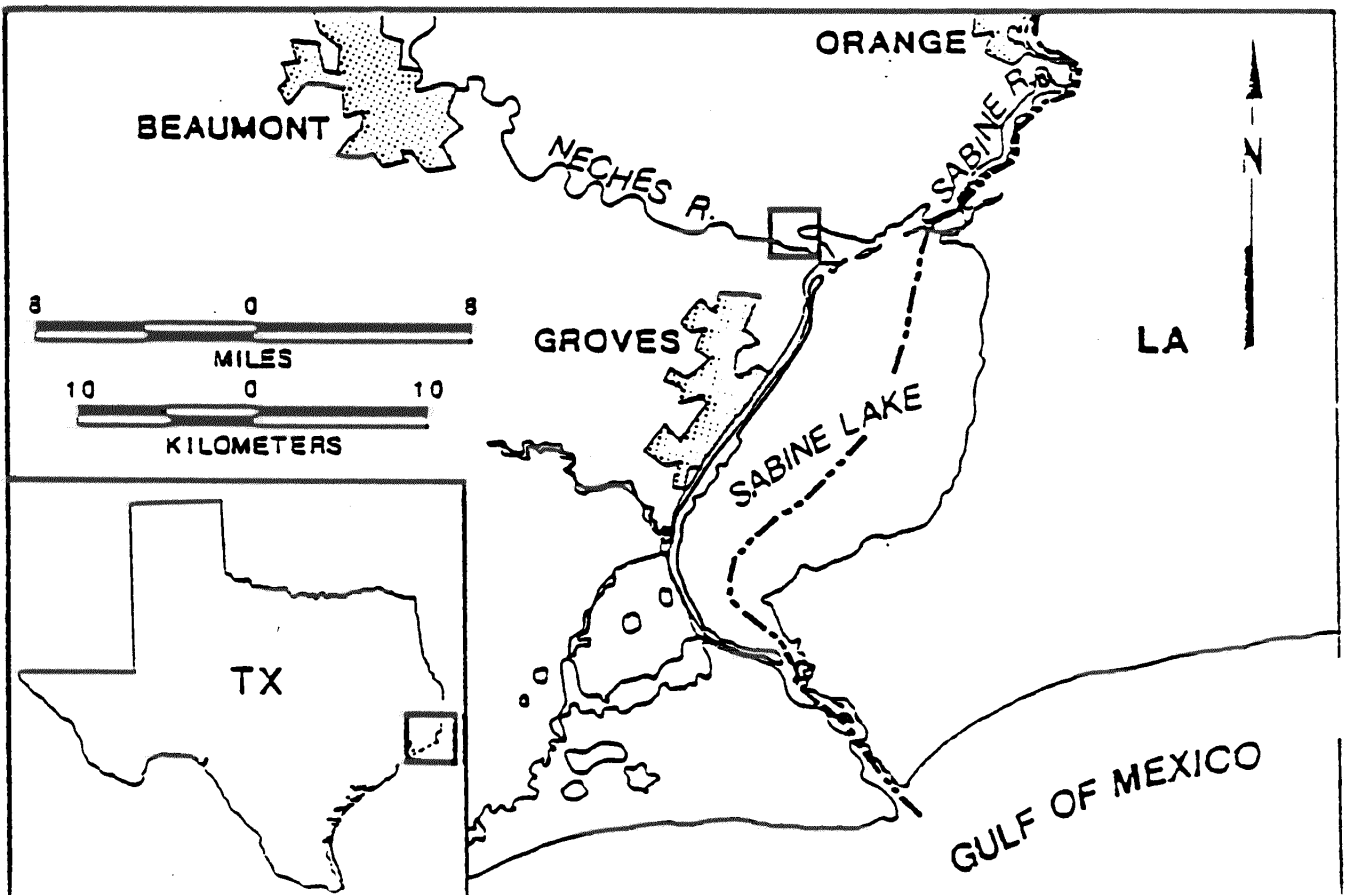
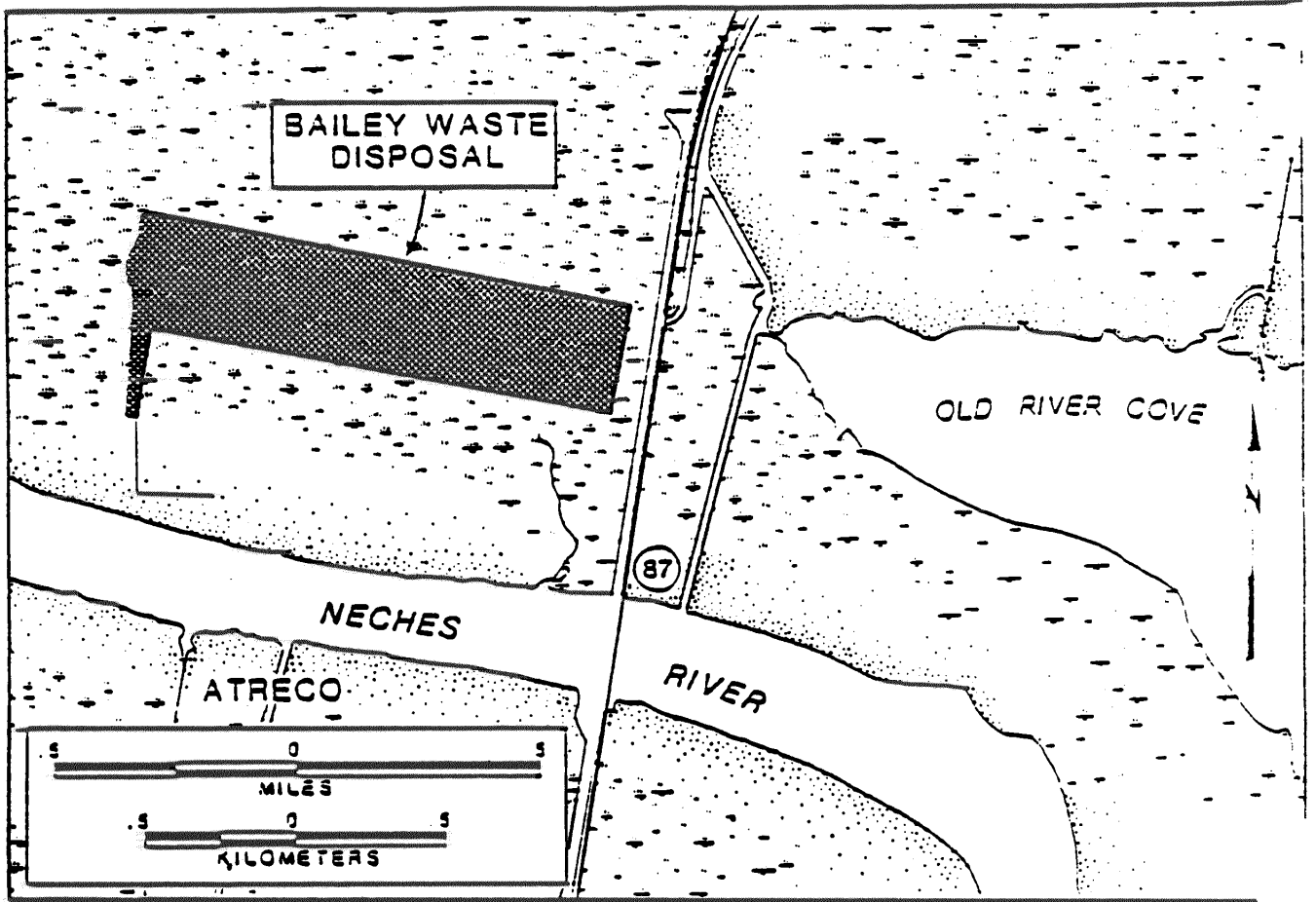
Bailey Waste Disposal is an industrial waste disposal site which was active in the 1950's and mid-1960's. The site is located adjacent to the Rainbow Bridge at Bridge City, Texas, and the north shore of the Neches River and Lake Sabine. The property has changed hands several times since the site was closed to disposal activity in the late 1960's. The present owner of record is Gulf State Utilities, who acquired the property in 1971 as part of a land acquisition and shoreline consolidation effort.

Definition of waste pits on the site is difficult due to the generally marshy nature of the area. Survey data indicate that pit depths range from approximately one to four meters in an area that is flushed frequently by rains, floods, and tidal groundwater. A tidal period was documented in the groundwater levels in test wells over the site. Soil permeability in the clay and sand soils is high, and leads to a shallow water table connecting with the Neches River.

Proximity of Chemical Hazard to Marine Resources

The Texas Department of Water Resources (TDWR) is the lead agency for the State of Texas. A preliminary assessment of the site conducted by TDWR in 1980 resulted in an EPA investigation and inclusion of the site in the NPL. The site itself is closed to the public by a fence and sign system, though recreational and subsistence fishing occurs literally at the main entrance to the site. Public awareness of the site and the potential human exposure via food chain contamination is very high as a result of subsistence fishing activity in the area.

Investigations conducted by EPA in 1982 were oriented toward detecting groundwater contamination. TDWR has conducted a very limited marine sampling program; the results of the sample analysis are inadequate to



confirm or disprove contamination of the local crab and bottom fish populations. Groundwater samples from the test wells were analyzed for total organic carbon (TOC), total organic halogens (TOH), pH, specific conductivity, and metals, with a total of 33 priority pollutants (.006 - 1,400 ppm) identified. An additional 128 non-priority pollutants (.006 - 6,000 ppm) were also identified. The majority of these non-priority pollutants contain root compounds which are on the hazardous list, and very probably represent combination and degradation products of the compounds originally present in the site. The most significant wastes include solvents (toluene, benzene, tridichloroethylene, dichloroethylene), chlorides (vinyl, methylene, benzene), phthalates, fluorides, phenols, aldehydes, glycols, and traces of nine heavy metals.

Though no sampling data exist, there is little doubt that soluble contaminants have left the site by ground and surface routes. Insoluble fractions of compounds are common over the surface of the site, suggesting the possibility of offsite migration during flooding episodes. Despite the fact that the Neches River and Sabine Lake contain high background levels of many of the pollutants common to the Bailey site, sampling during a flooding period could identify offsite pollutant migration.

Marine Resources at Risk

Sabine Lake is approximately 416 square kilometers in area. The average depth is two meters, and salinities range from 3-50 parts per thousand (ppt). The lake and associated rivers support both marine and freshwater fisheries, some of commercial importance. These include oyster, croaker, striped mullet, black drum, red drum, gaff-top catfish, seatrout, southern flounder, shrimp, menhaden, and blue crab. The blue crab fishery is currently the most important of these fisheries. Sabine Lake also supports a large sport fishery. Nineteen species of ducks and geese inhabit two major wildlife refuges and other portions of the lake shores.

At present, the EPA action is concentrating on the RAMP study. Whatever action is called for by the RAMP must deal with the nature of the site, and the fact that cleanup may involve a risk of releasing more pollutants into the Neches-Sabine system as the site is disturbed.

Site Chronology

- 1950-1965 Active disposal at site.
- 1976 Gulf State Utility purchases site.
- 1980 TDWR makes preliminary site investigation.
- 1981 EPA site investigation proposed.
- 1982 TDWR collects crab samples at site.

- 1984 EPA phase I-III investigations complete. Results in proposal to add site to NPL.
- 1985 EPA Legal is reviewing case and holding discussions with numerous documented users of the site, and present owner.

NOAA Reviewer: Todd Baxter, NOAA Hazardous Materials Response Branch

EPA Contact: Drew Puffer

TDWR Contact: Harry Boudreaux

References

Boudreaux, Harry, 1984. Personal Communication. Texas Department of Water Resources, Beaumont, Texas.

Phase II Investigation, Vol I., 1982. Espey, Huston and Associates, Inc., Austin, Texas.

Puffer, Drew, 1984. Personal Communication. U.S. Environmental Protection Agency, Dallas, Texas.