Kansas Department of Health and Environment

Bureau of Environmental Remediation, Remedial Section

State Water Plan Contamination Remediation Program

Kinsley Pesticide Cleanup

Background:
The Kinsley Airport Site was contaminated with pesticides due to negligent practices of a former aerial pesticide applicator business that operated at the airport for at least ten years. Sampling conducted by both City of Kinsley and the Kansas Department of Health and Environment (KDHE) indicated that soil and ground water at the site was contaminated with various pesticides. The Kinsley Airport is owned by the City of Kinsley, and the aerial sprayer business was defunct, having declared bankruptcy in 1992. Since the City was financially unable and there was no viable responsible party to address the contamination, the site was considered an "orphan site" and was assigned to the KDHE State Water Plan Contamination Remediation Program. In 1996, the State Water Plan program investigated the site and identified widespread pesticide contamination in soil and ground water, including alachor at a level exceeding 8,000 μg/L, or 4,000 times the allowable level in ground water. Fortunately, no domestic water wells were identified near the contaminated area. Surface soil was determined to be contaminated with toxaphene at a level exceeding 180 mg/kg, 23 times the regulated level. The primary risk from the toxaphene-contaminated soils was determined to be inhalation of airborne dust particles.

Solution:
KDHE determined the most immediate threat to the public and the environment was the contaminated soil. In 1997, a Corrective Action Study was conducted at the site which determined a combination of soil removal, soil inversion, and capping would be the most cost-effective method corrective action measure for the site.

Contaminated soil excavation and removal.

New asphalt caps contaminated soil beneath aircraft parking area.

Cleanup was conducted at the site by KDHE in 1998. More than 800 tons of contaminated soil, asphalt, and concrete were removed from ditches, culverts, and aircraft parking areas and hauled to a licensed landfill for disposal. Fill areas were replaced with clean topsoil, approximately two acres of asphalt on the aircraft parking area was replaced, and impacted ditches and culverts were dug out and re-formed with clean material. More than three acres of contaminated surface soil in level areas was inverted by deep plowing, capped with three inches of clean topsoil, and revegetated to hold the soil in place. Following cleanup activities, samples collected from surface soils indicated toxaphene levels throughout the site were within regulatory levels. A restrictive covenant was placed on the property.

Sampling of site monitoring wells following the clean up activities indicated a reduction of pesticide contamination to below regulatory levels. Additional ground water sampling was conducted by KDHE which confirmed pesticide levels in ground water had declined dramatically. The Kinsley site was placed on long term monitoring status. Annual sampling of the site continued to indicate contamination within regulatory levels. After three years of monitoring, the Kinsley Airport Site met reclassification criteria. This site has been reclassified as resolved and removed from KDHE's list of active sites.

Benefits:

- **800 tons of pesticide waste removed**
- **Two acres of land capped by asphalt and ready for commercial use**
- **A source of ground water contamination eliminated**

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