

Kansas Department of Health and Environment

Bureau of Environmental Remediation, Remedial Section

State Water Plan Contamination Remediation Program



Standard Asphalt and Rubber Company (SARCO)

Background:

The Standard Asphalt and Rubber Company (SARCO) site was formerly utilized as a petroleum refinery. Refinery operations began in 1905 and continued through the late 1920's. Primary refinery products included refined petroleum and asphalt. Environmental contamination resulted from disposal of tank bottoms and other sludge material into excavations at the site.

A majority of the subject property was utilized for cattle grazing through the mid-1900's and was subsequently sold for redevelopment as a residential area. The first house was built on-site in 1974. Complaints regarding sludge seepage and surface water impact were first received by the Kansas Department of Health and Environment (KDHE) in 1986.

Following the 1986 complaints, several environmental investigations were performed to determine the extent of impact and to evaluate effective cleanup options. Based on the investigative findings, remediation activities were designed to focus on excavation and containment of sludge material that was present at and near the surface, was mobile during warm weather, and which posed significant, direct exposure risk to residents in the area. These criteria resulted in the identification of six properties with significant mobile sludge impact, four of which were residential.

Solution:

All mobile waste material present on the four residential properties was removed and replaced with clean fill. Excavated waste material was transported to the sludge pond area where sludge pond and excavated waste was mixed with cement kiln dust to raise pH and reduce contaminant mobility. The former sludge pond and cement kiln dust treatment area was subsequently encapsulated with an impermeable clay and



Sampling and characterization of sludge material. Seepage is more significant during warm weather.

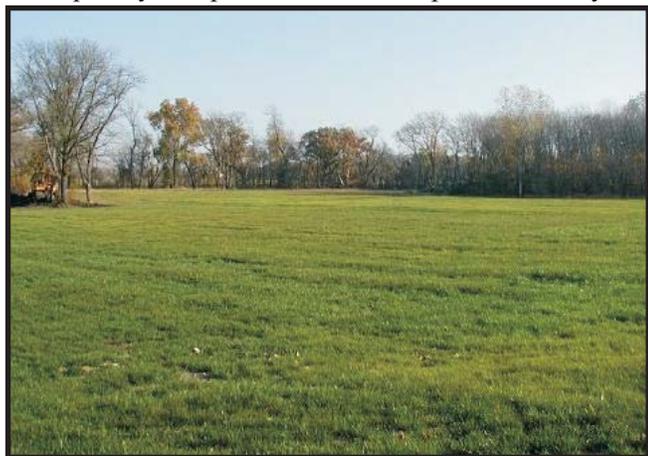
soil layer, and vegetation was established to prevent further contaminant mobility and exposure risk. More than 2,300 cubic yards of waste were removed from residential properties and approximately 9,000 cubic yards of waste were treated during the SARCO project.

Testing of treated material indicated that the low pH had been neutralized and that the sludge was no longer mobile. Direct exposure risk is no longer present and the human health and environmental risks previously associated with the SARCO site have been significantly reduced.

Environmental liability and property value implications are common concerns associated with environmental contamination. The State Water Plan Contamination Remediation program has provided a mechanism to reduce uncertainty regarding subsurface conditions within the SARCO area and to clearly document historical activity, including both refinery operations and remedial action, for future reference. Cleanup under the State Water Plan provides credible and readily available resources for lenders, developers, etc. to access future land use considerations. It is anticipated that the completion of this project will have a positive effect on area property value, and will alleviate skepticism associated with the purchase and/or redevelopment of area property.

Benefits:

- **2,300 cubic yards of waste removed from residential property;**
- **9,000 cubic yards of waste treated;**
- **Cleanup promotes property transfers in the residential development;**
- **Direct contact with sludge material eliminated.**



Former sludge pit area following remediation, cap construction, and revegetation.