STATEMENT OF BASIS/FINAL DECISION AND RESPONSE TO COMMENTS SUMMARY

REGION VII
ID# 0524

ABANDONED INDIAN CREEK OUTFALL SUBSITE
U. S. DOE, KANSAS CITY PLANT

Kansas City, Missouri
(signed December 20, 1990)

Facility/Unit Type: **Federal Facility**
Contaminants: **PCBs**
Media: **Sediments**
Remedy: **Excavation and disposal at off-site landfill**

FACILITY DESCRIPTION

The U. S. Department of Energy (DOE) conducted a Corrective Measures Study (CMS) and will submit a Corrective Measure Implementation (CMI) plan for the Abandoned Indian Creek Outfall (AICO) in accordance with the schedule of the Corrective Action Order. The selected corrective measure is consistent with the intent of §3008(h) of RCRA and the contaminant-specific requirements of §6(e) of the Toxic Substances Control Act and 40 CFR §761.60(d). The cleanup levels are consistent with the proposed Subpart S regulations.

The AICO subsite is located just south of the main DOE plant in Kansas City, Missouri. The outfall is a large pipe that discharged stormwater runoff from the DOE plant from the early 1960s to 1974. DOE used polychlorinated biphenyls (PCBs) in enclosed equipment systems such as transformers, capacitors, and heat transfer systems. Stormwater runoff transported PCBs from equipment leaks and spills through the outfall to Indian Creek sediments.

During the AICO operation, the stormwater was discharged directly into the surface water of the Indian Creek channel. The original channel has since been relocated as part of a flood control plan. Runoff from the site continues to enter Indian Creek which flows into the Blue River.

The AICO subsite is located in a 100-year floodplain and is subject to flooding and erosion. The water table is approximately 3-4 feet below grade in the proposed excavation area.

AICO is downgradient of other contaminated locations at the DOE facility that have documented releases of VOCs to ground water. DOE is conducting interim measures to recover the VOCs. If the interim measures are unsuccessful, VOCs could migrate to the AICO subsite, increasing the leaching of PCBs into the ground water.

EXPOSURE PATHWAYS

Exposure pathways considered in assessing threats to human health and safety and selecting the corrective measure were soil ingestion, inhalation, dermal contact, and ingestion of contaminated flora and fauna.

CONTAMINATION DETECTED AND CLEANUP GOALS

Media	Estimated Volume	Contaminent	Average Concentration	Action Level	Cleanup Goal*	Point of Compliance
soil	17,000 tons	PCB	at 1' 16.7 ppm at 4' 21.5 ppm at 6' 45.2 ppm at 9' 561.9 ppm at 11' 340.2 ppm at 14' 1756.2 ppm at 16' 346.3 ppm at 18' 670.6 ppm at 21' 51.4 ppm	above 10 ppm	10 ppm	Not provided

* Average concentration calculated from data provided in Table 1, Soil PCB Results-Round 1, Borings 1-19.

** Cleanup goal based on "Development of Advisory Levels for Polychlorinated Biphenyls (PCBs) Cleanup" (OHEA-E-187, May 1968) and background document referenced in May 1986 PCB cleanup policy rule.

SELECTED REMEDY

The selected remedy entails excavation and removal of PCB-contaminated soil. Ground water will be pumped from dewatering wells into a holding tank to lower the water table in the excavation area. Soil contaminated with greater than 10 mg/kg of PCBs will be excavated (17,000 tons) and stabilized with fly ash (3,000 tons) to remove any free liquids. All non-liquid PCB-contaminated soils will be disposed of in an EPA-permitted chemical waste landfill. The excavation area will be backfilled and capped to prevent exposure and migration of residuals.

The remedy assures protection of human health and the environment by providing rapid cleanup, no significant release of contaminants to air or water from cleanup operations, and cleanup of PCBs to levels established as protective of human health and the environment in the PCB cleanup policy.

The total estimated costs associated with the selected remedy are $8,484,000 and the remedy will require 4 months to implement.

INNOVATIVE TECHNOLOGIES CONSIDERED

- Advanced chemical fixation
- Thermal desorption
- Dechlorination.

PUBLIC PARTICIPATION

EPA solicited public comments and announced a public hearing on July 22, 1990 in The Kansas City Star. EPA received two comments. At the public hearing, a commenter agreed with DOE's choice for remediation. A written comment recommended covering with soil in place based on a belief that PCBs have not been shown to cause ill effects in humans and animals, and that the proposed remedy is not a wise use of resources.

NEXT STEPS

EPA has elected not to modify the selected remedy as a result of public comments. Under the approved schedule of the §3008(h) Consent Order, DOE will submit a CMI work plan for review and approval by November 1, 1991.

KEY WORDS

sediment; soil; ingestion; inhalation; dermal contact; PCBs; VOCs; excavation; off-site disposal; filling.

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