STATEMENT OF BASIS/FINAL DECISION AND RESPONSE TO COMMENTS SUMMARY

REGION X
ID # 5502

Pendleton Woolen Mills, Inc.
Washougal, Washington
(Signed May 11, 1995)

Facility/Unit Type: **Wool processing facility, cloth and clothing production, dry cleaning**
Contaminants: **Dieldrin**
Media: **Soil, groundwater, sediments, and surface water**
Remedy: **Excavate and cap soil, cover soil with grass, perform groundwater monitoring**

FACILITY DESCRIPTION

In 1988, EPA and Pendleton entered into a consent order that required Pendleton to close a ballast water pond at the facility and to conduct a RCRA Facility Investigation (RFI) and a Corrective Measures Study (CMS). The RFI included sampling of soil, groundwater, sediments, surface water, and aquatic biota. The pesticide dieldrin was the most frequently detected organic compound in soils beneath and south of the "Piece/Yarn" and "Stock Dye Houses", in groundwater south of the buildings, and in sediments in the drainage ditch along the north side of State Route 14.

Pendleton has been in operation since 1909. Today it is the only industry in town and a major employer for local residents. When the facility was built, it was constructed on a floodplain to take advantage of river flooding to facilitate the removal of manufacturing wastes. Waste dye and dieldrin, a class B carcinogen used as a mothproofing agent, would accumulate in the floodplain until the next flood washed it away. In the 1970's, a catchment system was installed to collect waste dye and route it to an on-site wastewater treatment facility.

The facility is located on the edge of town along the northern bank of the Columbia River in Washougal, Washington. There is an industrial park across the road to the east and an open area to the west. To the south there is a city park. A small pond, or wetland, is located on the site and will be maintained as a wetland for waterfowl. The nearest water supply wells are located 3,600 feet north (up gradient) of the site. Groundwater elevation information shows that groundwater does not flow from the site toward Washougal's public well fields.

EXPOSURE PATHWAYS

The potential exposure pathways for contaminated soil are incidental ingestion of soil, dermal contact of soil, and inhalation of contaminated soil as dust. The potential exposure pathways for contaminated groundwater are ingestion and dermal contact. A fate and transport analysis conducted as a part of the RFI indicated that dieldrin is adsorbed into the soil. It also indicated that leaching of dieldrin from soils to groundwater under existing site conditions should not cause a detectable increase in dieldrin concentrations in the Columbia River (the point of potential exposure to humans and aquatic organisms) for at least 300 years. Exposure to contaminated sediments and surface water by aquatic organisms is also a concern.

SELECTED REMEDY

Buildings at the facility that are above dieldrin-contaminated soil will be demolished. Pendleton will place a low permeability, engineered cap over the area, rebuild grades using soils in existing stockpiles, and vegetate the cap to prevent soil erosion. The upper one foot of soil in the contaminated area has already been excavated and disposed of off-site at a hazardous waste landfill.

CONTAMINATION DETECTED AND CLEANUP GOALS

Media	Estimated Volume	Contaminant	Maximum Concentration (ppm)	Action Level	Cleanup Goal	Point of Compliance
Soil	Not given	Dieldrin	Not given	.0022-.05	.0022-.05	Facility Boundary
Groundwater	Not given	Dieldrin	.033-.53	.0022-.05	.0022-.05	Facility Boundary
Surface water and sediments	Not given	Dieldrin	30-73	.0022-.05	.0022-.05	Facility Boundary

Groundwater monitoring will be performed for at least three years to determine whether significant increases in dieldrin concentrations occur near the river. Pendleton has also agreed to impose institutional controls on the property to prevent future development of drinking water supplies.

PUBLIC PARTICIPATION

The public comment period began on April 7, 1995, and ended on May 8, 1995. Notice of the public comment period was announced in newspapers in Portland, Oregon, and Camas, Washington. The Statement of Basis and supporting documents were available to the public from various sources. No comments were received.

INNOVATIVE TECHNOLOGIES

The CMS considered biological treatment of excavated soil by introducing microorganisms to stimulate biodegradation of contaminants. Because bioremediation may not effectively treat soils contaminated with dieldrin, it was not chosen as the selected remedy.

NEXT STEPS

EPA will continue to monitor contaminant concentrations in the groundwater near the river.

KEY WORDS:
soil, groundwater, sediments, surface water; ingestion, direct contact, dermal contact; pesticides, dieldrin; capping, excavating, soil cover, innovative technology considered: bioremediation

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