

## ***Toolkit for Greener Practices***

### **Showcase of Ideas**

#### **Option 1-6: Recyclable or Recovered Environmental Material**

##### **Wood Treatment Plant: Closed Loop System and Cleanup Operation**

###### **Site conditions:**

A major release of pentachlorophenol (PCP) at a wood-treatment plant contaminated soil and ground water.

###### **Preventive activity description:**

- Rather than discarding the product recovered during cleanup as hazardous waste, the company reused it in its wood-treatment production lines.
- A feasibility study recommended the innovative Contained Recovery of Oily Wastes (CROW) process as the preferred alternative. The CROW process was developed by the Western Research Institute as an *in-situ* remediation technology to mobilize and remove oily waste accumulations from the subsurface. The technology involves the injection of heated water into the subsurface to mobilize oily wastes (non-aqueous petroleum liquids), which are removed from the subsurface through recovery wells. An oil and water separator collects the oily waste from the ground water for disposal or reuse/recycling. A portion of the water is then heated and re-injected in the subsurface. The excess water is treated before it is discharged. The CROW process may be modified to treat any size area by varying the number of injection and recovery wells and adjusting the capacity of the water-treatment system.
- Secondly, embraced eco-industrial principles by reusing PCP recovered from another remediation site in the region. (Park Penta site)

###### **Benefits realized through the Pollution Prevention/Sustainability approach:**

- To date, 30,000 gallons of PCP have been recovered from the soil and ground water release and recycled on-site (resource conservation, reuse).
- Obtained PCP solution recovered from another cleanup site to use as input, thereby diverting it from disposal at an industrial (resource conservation; reuse).
- In the past, partially used PCP from the former wood-treatment process line would have most likely been handled as waste rather than recycled, as it is in the new, closed-loop system.

###### **Keys to Success**

- Bell Lumber and Pole's willingness to perform a pilot using CROW technology. The U.S. Environmental Protection Agency's Innovative Technology Program used the pilot results to promote the innovative remedy.
- Bell Lumber and Pole's perseverance to overcome regulatory barriers to collect, transport and reuse recovered product from another site. A business commitment to doing the right thing.

- County hazardous waste personnel and MDH approvals for unconventional handling of recovered product and for injection systems

**Regulatory administrative/legal tools:**

- Variance from groundwater injection rules (CROW system requirement)
- Consent Order (directs administration of the site cleanup and investigation)

**Recognition:** Bell Lumber and Pole, New Brighton, Minnesota, and Ramsey County Hazardous waste staff