

## D6. CLEANING UP WITH CARBON DIOXIDE

Shearon Harris in the USA is one site that has used new decontamination equipment from Massachusetts-based Non Destructive Cleaning. The NDC process uses carbon dioxide to decontaminate all kinds of materials, from metal tools to electronic equipment, without damaging the surface or producing secondary waste such as contaminated water, grit or chemicals. It enables companies to recover and reuse contaminated tools and components that might otherwise be discarded. This process does not use liquids, solid grit materials, or aggregates to clean equipment. The cleaning medium is CO<sub>2</sub>. The cleaning procedure itself is relatively simple. Dry compressed air is used to propel small, solid CO<sub>2</sub> particles onto a contaminated surface. On impact, the particles flash into dry, rapidly expanding CO<sub>2</sub> gas. The expanding gas flushes contaminants out of the pores in the object being cleaned.

High-efficiency particulate air filter capture small particles of contaminated material. Large pieces fall to floor and are vacuumed away to dry air filters. the process takes place in a mobile decontamination facility which breaks into three sections for transport. Two parts are connected to make a decontamination chamber, and the third part holds the liquid CO<sub>2</sub> storage vessel and a compressor.

*For more, "Cleaning Up with Carbon Dioxide," pg. 41, Nuclear Engineering International, Vol.41, No.502, May 1996.*