

N213. MOOSE™ Decontamination Robot Supports Nuclear Facility's Remediation Strategy

PENTEK, Inc. of Coraopolis (Pittsburgh), Pennsylvania, recently provided robotic nuclear decontamination services to both Consolidated Edison Company of New York and Indiana-Michigan Power Company. The MOOSE™ scabbling robot was used to support both companies' efforts to remediate radiologically contaminated concrete floors.

MOOSE was originally developed in 1984 for the Electric Power Research Institute for use in the decontamination of concrete floors during the cleanup of TMI-2. Since then, the self-contained robot has found major application in the remediation of hazardous chemicals, toxic materials, and radioactive wastes at power plants, public works projects, and industrial facilities. At Consolidated Edison's Indian Point Station, the MOOSE removed 3,500 square feet of contaminated floor coatings over a weekend. The MOOSE scabbling robot was used to support the construction schedule during a facility modernization project.

Indiana-Michigan Power's Donald C. Cook Plant detected low-level radioactive wastes in a waste storage building. The MOOSE was utilized and removed 5 mm of contaminated concrete and up to 50 mm in localized hot spots. The concrete was resurfaced with Silikal acrylic flooring to ensure easier cleanup of future accidents. The entire decontamination operation took five working days.

MOOSE utilizes a purely mechanical concrete removal process known as scabbling, where the upper layers of the concrete floor are pulverized by high speed, reciprocating pistons equipped with tungsten carbide cutting bits. This mechanical process produces the absolute minimum volume of waste (only the contaminated concrete itself), since no water, solvents, acids, abrasives, or other foreign materials are introduced into the concrete. To further minimize waste handling and maximum productivity, the MOOSE is equipped with an integral, on-board vacuum system capable of packaging the concrete waste directly into the waste drums. The scabbling process is completely contained inside the evacuated shroud which provides sufficient control of airborne particulates to allow operators as well as other nearby personnel to work without the need for respiratory protection. This very important feature provides for considerably greater worker comfort and safety, while eliminating the need to construct elaborate negative pressure containment systems, protect nearby equipment from tramp dust and debris, or shutdown adjacent manufacturing or process operations.

Taken from "MOOSE™ Decontamination Robot Supports Nuclear Facility's Remediation Strategy," PENTEK, Inc. News Release. For more information, contact George Harris, PEN-TEK, Inc., Decontamination Products Division, 1026 Fourth Avenue, Coraopolis, PA 15108, USA. Phone: 412/262-0725; FAX: 412/262-0731