UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION
WASHINGTON, DC 20555-0001

September 8, 2020

NRC INFORMATION NOTICE 2020-01: INCREASED ELECTRONIC EQUIPMENT ISSUES AFTER ELECTROSTATIC CLEANING

ADDRESSEES

All U.S. Nuclear Regulatory Commission (NRC) licensees, Agreement State Radiation Control Program Directors, and State Liaison Officers.

PURPOSE

The NRC is issuing this information notice (IN) to inform addressees of recent operating experience associated with the use of electrostatic spray cleaning. An NRC licensee noticed an increase in the frequency of issues with control room simulator equipment[1] following the routine use of an electrostatic spray cleaning technique in their simulator facilities. The NRC expects that recipients will review the information for applicability to their facilities and consider actions, as appropriate, to avoid similar problems. INs may not impose new requirements, and nothing in this IN should be interpreted to require specific action.

DESCRIPTION OF CIRCUMSTANCES

While conducting control room simulator activities in June 2020, the simulator staff at an NRC-licensed power reactor plant informed NRC inspectors that they had noted an increase in the frequency of issues with simulator equipment. Due to the novel coronavirus (COVID-19) pandemic, the training facilities that house the licensee's control room simulator employed deep cleaning methods to treat for potential viral surface contamination. One of the cleaning methods used for the training facilities, including the control room simulator panels and surfaces, was an electrostatic spraying technique, also referred to as an antiviral "fogging." The treatment was performed on a weekly basis starting in March 2020.

After starting the treatment, the licensee noted the following control room simulator equipment issues: instances of sticking control panel pushbutton switches, audio indications of control rod movement failing intermittently, and sluggish movement when operating pump and valve control panel switches. Each of these equipment issues had been experienced previously in the simulator; however, the licensee noted more frequent occurrences following use of the antiviral "fogging" treatments. At no time was safety significant equipment exposed to this cleaning technique and the plant continued to operate safely.

The licensee's control room simulator facilities subsequently stopped using the electrostatic spraying technique and employed other disinfectant techniques.

[1] Control room simulator equipment is used as a full-size model version of control room equipment to train reactor plant operators. The NRC is not aware of any instances of the use of the electrostatic spraying cleaning method in any actual NRC-licensed reactor plant control rooms.

DISCUSSION

The electrostatic spraying technique uses a device that coats facility surfaces with an antiviral chemical bound to electrostatically charged particles. The NRC is not aware of any instances of the use of this electrostatic spray technique in any NRC-licensed control room facilities. The NRC is providing this operating experience to inform licensees of potential risks posed by cleaning methodologies during the COVID-19 pandemic.

CONTACTS

Please direct any questions about this matter to the technical contact listed below.

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