

**ATTACHMENT 1
RADIONUCLIDE RELEASE INITIAL REPORT ELECTRONIC FORMAT
PAGE 1 of 4**

**STATE OF ILLINOIS
NUCLEAR POWER PLANT
RADIONUCLIDE RELEASE REPORT
INITIAL REPORT**

The following information must be submitted to the Illinois Environmental Protection Agency and to the Illinois Emergency Management Agency and Office of Homeland Security to report a release of a radionuclide pursuant to 35 Ill. Adm. Code 1010.202. This initial report must be submitted to each agency via phone and electronically within 24 hours of the release. Please attach additional sheets as needed.

This form can also be used by a licensee that, pursuant to the last section of 35 Ill. Adm. Code 1010.104, reports a release of radionuclides that is not required to be reported under Section 13.6 of the Environmental Protection Act.

Report Date/Time 07/03/23 / 1520

Nuclear Generation Station Name Quad Cities Nuclear Power Station

Address 22710 206th Ave North

City, State, Zip Cordova, IL 61242

Name of Principal Executive Officer Brian Wake

Telephone Number (309) 227-3600

Signature 

Name of Licensee Quad Cities Nuclear Power Station

Address 22710 206th Ave North

City, State, Zip Cordova, IL 61242

ATTACHMENT 1
RADIONUCLIDE RELEASE INITIAL REPORT ELECTRONIC FORMAT
PAGE 2 of 4

Specific Location of Release Radwaste Vault Area adjacent to Radwaste Max Recycle

Time of Release 07/03/23 / 0800

Duration of Release Ongoing

Identify Radionuclide Release Tritium

Estimate the Quantity of Release (Curies) No new spill/release has been identified at this time. A release was reported at the Radwaste Vault area in 2018 and remediation has been ongoing since that time. As a conservative estimate, 0.0849 Ci has been recovered since remediation recommenced on 6/14/23.

Estimate of Volume Released Under investigation, no new spill/release has been identified.

Estimate of Concentration (pCi/L) of Release Under investigation, no new spill/release has been identified.

Estimate of Flow-Rate, if on-going Under investigation, no new spill/release has been identified.

General Description of Release (including, but not limited to, whether release was to groundwater, surface water, or soil; a description of release area; and the size of affected area) QC-RW-1 and QC-GP-18 are located in the Radwaste Vault area which is directly north of the Max Recycle Building where the facility reported a release of tritium with a concentration of 4.5 million pCi/L in March of 2018. These wells have continued to be monitored and serve as remediation wells for the 2018 release. Groundwater recovery from wells QC-RW-1 and QC-GP-18 recommenced on 6/14/23 after a hiatus due to construction activities in the area. The areas immediately adjacent to these wells were excavated and open to precipitation during construction work which was recently concluded. Shortly after recommencing remediation, elevated concentrations of tritium were detected in QC-RW-1 and QC-GP-18. As of 7/3/23, groundwater sampling of well QC-RW-1 showed an activity of 470,000 pCi/L. Sample results from QC-GP-18 located 10 feet from QC-RW-1 showed an activity of 105,000 pCi/L. No other gamma isotopes have been detected in the samples and no new release source has been identified at this time.

Actions Taken in Response to Release

Remediation continues via QC-RW-1 and QC-GP-18 as well as daily sampling. Investigation team has been set up on site to determine potential causes of the increase and to determine whether a new release has occurred. Surrounding wells have been sampled with results within the expected range. Although no new release source has been identified at this time, the station is continuing to investigate the cause of the elevated tritium concentrations.

ATTACHMENT 1
RADIONUCLIDE RELEASE INITIAL REPORT ELECTRONIC FORMAT
PAGE 3 of 4

Known and Anticipated Impacts to Human Health and/or Environment

Increased concentrations of tritium are being seen in remediation wells in the vicinity of the Radwaste Vault areas. Tritiated water in detectable concentrations is limited to the vicinity of the Radwaste Vault area which is directly north of the Max Recycle Building and within the property boundary. Actions are being taken to recover released material. The on-site area is covered with relatively impervious material (asphalt or concrete) limiting potential exposure pathways. Elevated concentrations of tritium are not being observed in groundwater wells outside of the immediate vicinity of the Radwaste Vault area. Based on current conditions/data, there are no impacts to human health or the environment.

Additional Information

Number for reporting via telephone:

Illinois EPA – (217) 782-3637

IEMAOHS – (217) 782-7860

Submit electronically to:

IEPA at "EPA.RadRelease@Illinois.gov"

IEMAOHS at "ema.npprelease@illinois.gov"

Contacts for Further Information

Name Rachel Luebbe

Address 22710 206th Ave North

City, State, Zip Cordova, IL 61242

Telephone Number (309) 227-2813

ATTACHMENT 1
RADIONUCLIDE RELEASE INITIAL REPORT ELECTRONIC FORMAT
PAGE 4 of 4

Name _____

Address _____

City, State, Zip _____

Telephone Number _____