

SUBTITLE I

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE I: ATOMIC RADIATION
CHAPTER I: POLLUTION CONTROL BOARDPART 1010
PROCEDURES FOR REPORTING RELEASES OF RADIONUCLIDES AT NUCLEAR
POWER PLANTS

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AUTHORITY: Implementing and authorized by Sections 13.6 and 27 of the Environmental Protection Act [415 ILCS 5/13.6 and 27].

SOURCE: Adopted at 32 Ill. Reg. 7789, effective May 2, 2008; amended in R18-28 at 47 Ill. Reg. 6713, effective May 4, 2023; amended in R25-23 at 49 Ill. Reg. 12793, effective September 23, 2025.

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SUBPART A: GENERAL PROVISIONS

Section 1010.100 Purpose

This Part prescribes standards for detecting and reporting unpermitted releases of radionuclides from nuclear power plants pursuant to Section 13.6 of the Illinois Environmental Protection Act [415 ILCS 5/13.6].

Section 1010.102 Applicability

This Part applies to licensees of nuclear power plants that are required under Section 13.6 of the Act to report an unpermitted release of a radionuclide.

Section 1010.104 Scope

This Part sets forth the procedures licensees of nuclear power plants must follow to satisfy their obligation under Section 13.6 of the Act to report unpermitted releases of radionuclides to the Agency and to IEMA. This Part addresses only the reporting of unpermitted releases of radionuclides required under Section 13.6 of the Act. The requirements of this Part are independent of, and do not replace or supersede, any other reporting requirements in State or federal law or regulation. This Part does not prevent or preclude licensees from reporting releases of radionuclides that are not required to be reported under Section 13.6 of the Act.

Section 1010.106 Definitions

Except as stated in this Section, or unless a different meaning of a word or term is clear from the context, the definition of words or terms in this Part shall be the same as that applied to the same words or terms in the Illinois Environmental Protection Act.

“Act” means the Illinois Environmental Protection Act [415 ILCS 5].

“Agency” means the Illinois Environmental Protection Agency.

“Curie” or “Ci” means the quantity of radioactive material producing 37 billion nuclear transformations per second.

"Groundwater" means underground water that occurs within the saturated zone and geologic materials where the fluid pressure in the pore space is equal to or greater than atmospheric pressure. [415 ILCS 5/3.64]

“IEMA” means the Illinois Emergency Management Agency.

“L” means liter.

“Licensee” means the holder of a license issued for a nuclear power plant under chapter I of title 10 of the Code of Federal Regulations.

“Licensee controlled area” means the land or property that is owned, leased, or otherwise controlled by the licensee.

“Picocurie” or “pCi” means the quantity of radioactive material producing 2.22 nuclear transformations per minute. One pCi is one trillionth (10^{-12}) of one curie.

"Person" is any individual, partnership, co-partnership, firm, company, limited liability company, corporation, association, joint stock company, trust, estate, political subdivision, State agency, or any other legal entity, or their legal representative, agent, or assigns. [415 ILCS 5/3.315]

“Station generated liquids” means liquids used in, or as a part of, the power generation process at a nuclear power plant and that contain, or potentially could contain, radionuclides.

“Surface water” means all water that is open to the atmosphere and subject to surface runoff.

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“Unpermitted release of a radionuclide” means any spilling, leaking, emitting, discharging, escaping, leaching, or disposing of a radionuclide into groundwater, surface water, or soil that is not permitted under State or federal law or regulation. [415 ILCS 5/13.6(c)]. “Unpermitted release of a radionuclide” does not include the discharge of a radionuclide from a point source at a designated process water or cooling water outfall identified in the nuclear power plant’s National Pollutant Discharge Elimination System permit, provided the discharge is authorized in the nuclear power plant’s United States Nuclear Regulatory Commission operating license.

Section 1010.108 Severability

If any provision in this Part or its application to any person or under any circumstances is adjudged invalid, such adjudication shall not affect the validity of this Part as a whole or of any portion not adjudged invalid.

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SUBPART B: REPORTING**Section 1010.200 Evaluation of Releases**

Within 24 hours after an unpermitted release of a radionuclide from a nuclear power plant into groundwater, surface water, or soil, the licensee must evaluate the release in accordance with this Section to determine whether it must be reported. The evaluation cannot take into account remedial actions taken in response to the release (i.e., the evaluation must be based on the volumes of station generated liquids and concentrations or quantities of radionuclides released, not on the volumes of station generated liquids and concentrations or quantities of radionuclides remaining after the initiation or completion of response actions). If the release is required to be reported, the licensee must report the release in accordance with Section 1010.202 of this Part.

- a) Licensees must report unpermitted releases of station generated liquids that result in tritium concentrations of 200 pCi/L or more outside of the licensee controlled area.
- b) Licensees must report unpermitted releases of station generated liquids that contain tritium at quantities of 0.002 Curies or more.

Section 1010.202 Reporting of Releases

- a) Reports required under Section 1010.200 must be given within 24 hours after the release to both the Agency and IEMA in accordance with the following:
 - 1) Reports to the Agency must be given by telephone and electronically. The Agency's telephone number for reporting environmental emergencies is 1-217-782-3637.
 - 2) Reports to IEMA must be given by telephone and electronically. IEMA's telephone number for reporting emergencies is 1-800-782-7860, or, if calling from outside Illinois, 1-217-782-7860.
 - 3) Electronic reports must be submitted on forms and in a format prescribed by the Agency, and must be submitted to addresses prescribed by the Agency and IEMA. The Agency shall consult with IEMA in developing the forms and format for electronic reports required under this Section.
- b) Reports required under Section 1010.200 must include, at a minimum, the following information using the best data available at the time of the report:
 - 1) The name and address of the nuclear power plant where the release occurred;
 - 2) The name, signature, and telephone number of the Principal Executive Officer for the nuclear power plant or the Principal Executive Officer's authorized agent;
 - 3) The specific location of the release;
 - 4) The time and duration of the release;
 - 5) An estimate of the volume and radionuclide concentrations (in pCi/L) of station generated liquids released, and an estimate of the flow rate if the release is ongoing;
 - 6) Identification of the radionuclides released and an estimate of the quantities released (in Curies);

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- 7) Whether the release was to groundwater, surface water, or soil, and a description of the area into which the release occurred (e.g., field, ditch, stream, or other description) and the size of the area affected;
 - 8) The actions taken to respond to, contain, and mitigate the release;
 - 9) The known and anticipated impacts to human health and the environment, including but not limited to groundwater and surface water resources, as a result of the release;
 - 10) The names, addresses, and telephone numbers of persons at the nuclear power plant who may be contacted for further information regarding the release; and
 - 11) The name and mailing address of the licensee of the nuclear power plant.
- c) The Agency must post copies of the electronic reports it receives under this Section on the Agency's website.

Section 1010.204 Follow-up Written Report

A licensee who reports a release under this Part must provide to the Agency and to IEMA a follow-up written report of the release within five business days after reporting the release.

- a) The follow-up report must confirm and update the information provided by the licensee under Section 1010.202 utilizing the best data available and must also include the following information:
 - 1) Copies of all lab analyses used to confirm the presence of, or conducted in response to, the release if lab analyses have been conducted;
 - 2) Plan view and, if available, geological cross-section maps showing the location of the release, the locations of samples taken to confirm the release if samples have been taken, the locations of samples taken in response to the release if samples have been taken, the measured and modeled extents of the release if known, the groundwater flow direction if known, groundwater contours if known, the boundary of the licensee controlled area, and structures, roads, and other surface features;
 - 3) An estimate of the volume and radionuclide concentrations (in pCi/L) of station generated liquids released but not recovered;
 - 4) An estimate of the quantities (in curies) of radionuclides released but not recovered;
 - 5) An updated description of activities taken in response to the release;
 - 6) If additional activities in response to the release are planned, a description of those activities; and
 - 7) The name and signature of the principal executive officer for the nuclear power plant or the principal executive officer's authorized agent.
- b) The follow-up report must be submitted electronically on forms and in a format prescribed by the Agency and must be submitted to addresses prescribed by the Agency and IEMA. Within five business days after submission of the electronic follow-up report, hard copies of the follow-up report must be submitted to the Agency and IEMA at the following addresses:

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Illinois Environmental Protection Agency
Bureau of Water
Groundwater Section
2520 West Iles Avenue
PO Box 19276
Springfield, Illinois 62794-9276

Illinois Emergency Management Agency
Division of Nuclear Safety
1035 Outer Park Drive
Springfield, IL 62704

- c) The Agency must consult with IEMA in developing the forms and format for reports required under this Section.
- d) The Agency must post copies of the follow-up reports it receives under this Section on the Agency's website.

(Source: Amended at 49 Ill. Reg. 12793, effective September 23, 2025)