ILLINOIS POLLUTION CONTROL BOARD
May 4, 2023

IN THE MATTER OF:	)	
	)	
AMENDMENTS TO 35 ILL. ADM. CODE	)	R18-28
SUBTITLE I: ATOMIC RADIATION	)	(Rulemaking – Atomic Radiation)

ADDENDUM

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE I: ATOMIC RADIATION
CHAPTER I: POLLUTION CONTROL BOARD

PART 1000
RADIATION HAZARDS

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1000.APPENDIX A Concentrations in Air Above Natural Background

AUTHORITY: Implementing Section 25b and authorized by Section 27 of the Environmental Protection Act [415 ILCS 5/25b and 27].

SOURCE: Adopted in R82-2 at 9 Ill. Reg. 19391, effective December 4, 1985; amended in R82-2(B) at 10 Ill. Reg. 12938, effective July 21, 1986; amended in R18-28 at 47 Ill. Reg. _____, effective _____.

SUBPART A: GENERAL PROVISIONS

Section 1000.101 Authority

The ~~Pollution Control~~ Board adopts the rules ~~and regulations~~ contained in this title under ~~pursuant to~~ the authority of Title VI-A of the Environmental Protection Act. [415 ILCS 5/25b]~~.~~ (~~Ill. Rev. Stat. 1983, ch. 111- 1/2, par. 1025(b)~~).

(Source: Amended at 47 Ill. Reg._____, effective _____)

Section 1000.102 Purpose ~~and Policy~~

a) This~~The regulations in this~~ Part establishes ~~establish~~ standards for protection against radiological air pollutants associated with materials and activities under licenses issued by the United States Nuclear Regulatory Commission (NRC) under ~~pursuant to~~ the Atomic Energy Act of 1954 (42 U.S.C. 5801 et seq.) ~~as amended~~, and the Energy Reorganization Act of 1974 (42 U.S.C. 5801 et seq.)

b) In addition to complying with the other applicable requirements of this Part, persons subject to this Part must ~~It is the policy of the Pollution Control Board that persons subject to this Part shall, in addition to complying with the requirements of this Part;~~ make every reasonable effort to maintain radiation exposures in, and releases of radioactive materials to, unrestricted areas as low as is reasonably achievable. The term "as low as is reasonably achievable" means as low as is reasonably achievable considering~~taking into account~~ the state of technology, the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations, in relation to the utilization of atomic energy in the public interest.

c) Persons licensed by the NRC ~~United States Nuclear Regulatory Commission~~ to operate light-water-cooled nuclear power reactors will~~shall be deemed to~~ satisfy

~~the requirements of this~~ subsection (b) if they achieve the design objectives and limiting conditions for operation specified ~~set out~~ in 10 CFR 50, Appendix I ~~(1984)~~, incorporated by reference in Section 1000.202. ~~This Part incorporates no further amendments or editions to those objectives and conditions for operation~~.

(Source: Amended at 47 Ill. Reg._____, effective _____)

Section 1000.103 Scope

This~~The requirements of this~~ Part applies ~~apply~~ to all persons who receive, possess, use, or transfer material licensed under~~pursuant to~~ ~~Parts~~ 10 CFR 30 through 35, 40, or 70, incorporated by reference in Section 1000.202, or who are licensed to operate a production or utilization facility under~~pursuant to~~ 10 CFR 50, incorporated by reference in Section 1000.202. ~~of the regulations of the United States Nuclear Regulatory Commission~~.

(Source: Amended at 47 Ill. Reg._____, effective _____)

SUBPART B: DEFINITIONS

Section 1000.201 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 are the same as that applied to the same words or terms in the Environmental Protection Act [415 ILCS 5]~~As used in this Part~~:

"Act" means the Environmental Protection Act~~,~~ [415 ILCS 5]. ~~Ill. Rev. Stat., 1983, ch. 111 1/2, pars 1001 et seq~~.

"Board" means the Illinois Pollution Control Board.

~~"Department" means the Illinois Department of Nuclear Safety.~~

.

"Dose" means the quantity of radiation absorbed, per unit of mass, by the body or by any portion of the body. Under this Part, ~~When these regulations specify~~ a dose during a period of time~~, the dose~~ means the total quantity of radiation absorbed, per unit of mass, by the body or by any portion of the body during such period of time. The~~Several different units of dose are in current use. Definitions of~~ units of dose ~~as~~ used in this Part ~~these regulations~~ are ~~set forth in the definitions of~~ "Rad" and "Rem", as defined in this Section.

"IEMA" means the Illinois Emergency Management Agency, Division of Nuclear Safety.

"Individual" means any human being.

"Licensed activity" means any activity engaged in under a general or specific license issued by the NRC.

"Licensed facility" means any facility constructed or operated under a permit or a general or specific license issued by the NRC.

"Licensed material" means any material received, possessed, used, or transferred under a general or specific license issued by the NRC.

"Licensee" means any person to whom a permit or a general or specific license has been issued by the NRC.

"NRC" means the United States Nuclear Regulatory Commission.

"Rad" means a measure of the dose of any radiation to body tissues in terms of the energy absorbed per unit mass of the tissue. One rad is the dose corresponding to the absorption of 100 ergs per gram of tissue. (One millirad (mrad) = 0.001 rad).

"Radiation" means any or all of the following: alpha rays, beta rays, gamma rays, X-rays, neutrons, high-speed ~~highspeed~~ electrons, high-speed protons, and other atomic particles; but not sound or radio waves, or visible, infrared, or ultraviolet light.

"Radioactive material" and "radioactive emissions" mean~~means~~ any dusts, particulates, fumes, mists, vapors, or gases which spontaneously emit ionizing radiation.

"Rem" means a measure of the dose of any ionizing radiation to body tissue in terms of its estimated biological effect relative to a dose received from an exposure to one roentgen of X-rays. (One millirem (mrem) = 0.001 rem). The relation of rem to other dose units depends on~~upon~~ the biological effect under consideration and ~~upon~~ the condition of irradiation. For ~~the purpose of~~ this Part, any of the following is considered to be equivalent to a dose of one rem:

An exposure to one roentgen of X- or gamma radiation;

A dose of one rad due to X-, gamma, or beta radiation;

A dose of 0.1 rad due to neutrons or high energy protons;

A dose of 0.05 rad due to particles heavier than protons and with sufficient energy to reach the lens of the eye. If it is more convenient to measure the neutron flux, or equivalent, than to determine the neutron dose in rads, one rem of neutron radiation may ~~for purposes of this Part~~ be assumed to be equivalent to 14 million neutrons per square centimeter incident upon the

body; or, if ~~there exists sufficient~~ information is available to estimate with reasonable accuracy the approximate distribution in the energy of neutrons, the incident number of neutrons per square centimeter equivalent to one rem may be estimated from the following table.

Neutron Flux Dose Equivalents

Neutron energy (Mev)	No. of Neutron per square centimeter equivalent to a dose of 1 rem (neutrons/cm^2)	Average flux to deliver 100 millirem in 40 hours (neutrons/cm^2 per second)
Thermal	970×10^6	670
0.0001	720×10^6	500
0.005	820×10^6	570
0.02	400×10^6	280
0.1	120×10^6	80
0.5	43×10^6	30
1.0	26×10^6	18
2.5	29×10^6	20
5.0	26×10^6	18
7.5	24×10^6	17
10.0	24×10^6	17
10 to 30	14×10^6	10

"Restricted area" means any area to which access ~~access to which~~ is controlled by the licensee to protect ~~for purposes of protection of~~ individuals from exposure to radiation and radioactive materials. "Restricted area" must ~~shall~~ not include any areas used as residential quarters, although a separate room or rooms in a residential building may be set apart as a restricted area.

"Unrestricted area" means any area to which access~~access to which~~ is not controlled by the licensee to protect ~~for purposes of protection of~~ individuals from exposure to radiation and radioactive materials, and any area used for residential quarters.

(Source: Amended at 47 Ill. Reg._____, effective _____)

Section 1000.202 Incorporations by Reference

The following materials are incorporated by reference. These incorporations by reference do not include any later amendments or editions:

a) Numerical Guides for Design Objectives and Limiting Conditions for Operations to Meet the Criterion "As Low as is Reasonably Achievable" for Radioactive

Material in Light-Water-Cooled Nuclear Power Reactor Effluents, 10 CFR 50, Appendix I (1984).

b) Rules of General Applicability to Domestic Licensing of Byproduct Material, 10 CFR 30 (1984).

c) General Domestic Licenses for Byproduct Material, 10 CFR 31 (1984).

d) Specific Domestic Licenses to Manufacture or Transfer Certain Items Containing Byproduct Material, 10 CFR 32 (1984).

e) Specific Domestic Licenses of Broad Scope for Byproduct Material, 10 CFR 33 (1984).

f) Licenses for Industrial Radiography and Radiation Safety Requirements for Industrial Radiographic Operations, 10 CFR 34 (1984).

g) Medical Use of Byproduct Material, 10 CFR 35 (1984).

h) Domestic Licensing of Source Material, 10 CFR 40 (1984).

i) Domestic Licensing of Production and Utilization Facilities, 10 CFR 50 (1984).

j) Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions, 10 CFR 51 (1984).

k) Domestic Licensing of Special Nuclear Material, 10 CFR 70 (1984).

(Source: Added at 47 Ill. Reg. _____, effective _____)

SUBPART C: STANDARDS AND LIMITATIONS

Section 1000.301 Permissible Levels of Radiation in Unrestricted Areas

A ~~No~~ person must not ~~shall~~ possess, use, receive, or transfer licensed material or engage in licensed activities in a way that creates radiation levels in the air~~in such manner as to create~~ in any unrestricted area:

a) That could result in a dose to the whole body greater than 0.5 rem in any single year~~Radiation levels in air suchthat any individual would be likely~~, when all radioactive emissions by the licensee are considered~~taken into account, to receive a dose to the whole body in excess of 0.5 rem in any one year~~;

b) That could result in ~~Radiation levels in air which, if~~ an individual ~~were~~ continuously present in the area receiving a dose greater than 2 millirems in any

single hour, ~~could result,~~ when all radioactive emissions by the licensee are considered~~taken into account, in his receiving a dose in excess of 2 millirems in any one hour~~; or

c) That could result in ~~Radiation levels in air which, if~~ an individual ~~were~~ continuously present in the area receiving a dose greater than 100 millirems in any 7 consecutive days, ~~could result,~~ when all radioactive emissions by the licensee are considered~~taken into account, in his receiving a dose in excess of 100 millirems in any seven consecutive days~~.

(Source: Amended at 47 Ill. Reg._____, effective _____)

Section 1000.302 Radioactive Emissions to Unrestricted Areas

a) A ~~No~~ person must not ~~shall~~ possess, use, receive, or transfer licensed material or engage in licensed activities in a way that releases ~~so as to release~~ to the air in an unrestricted area radioactive material exceeding the concentration limits ~~in concentrations which exceed the limits~~ specified in Appendix A ~~of this Part~~. For ~~purposes of~~ this Section, concentrations of radioactive material may be averaged over a period not greater than one year.

b) For ~~the purpose of~~ this Section, ~~section~~the concentration limits in Appendix A ~~of this Part shall~~ apply at the boundary of the restricted area. The concentration of radioactive material discharged through a stack, pipe or similar conduit may be determined for ~~with respect to~~ the point where the material leaves the conduit. If the conduit discharges within the restricted area, the concentration at the boundary may be determined by applying established factors for dilution, dispersion, or decay between the point of discharge and the boundary.

(Source: Amended at 47 Ill. Reg._____, effective _____)

SUBPART D: ADDITIONAL REQUIREMENTS

Section 1000.401 Applicability

This Subpart applies~~The provisions of this part apply~~ to radiation doses received by members of the public in the general environment and to radioactive materials introduced into the general environment due to ~~as the result of~~ operations that ~~which~~ are part of a nuclear fuel cycle.

(Source: Amended at 47 Ill. Reg._____, effective _____)

Section 1000.402 Definitions

As used in this Subpart:

"Curie" (Ci) means the ~~that~~ quantity of radioactive material that produces~~producing~~ 37 billion nuclear transformations per second. (One millicurie (mCi) = 0.001 Ci.)

"Dose equivalent" means the product of absorbed dose and appropriate factors to account for differences ~~differencies~~ in biological effectiveness due to the quality of radiation and its spatial distribution in the body. The unit of dose equivalent is the "rem." (One millirem (mrem) = 0.001 rem.)

"General environment" means the total terrestrial, atmospheric, and aquatic environments outside sites upon which any operation that ~~which~~ is part of a nuclear fuel cycle is conducted.

"Gigawatt-year" refers to the quantity of electrical energy produced at the busbar of a generating station. A gigawatt is equal to one billion watts. A gigawatt-year is equivalent to the amount of energy output represented by an average electric power level of one gigawatt sustained for one year.

"Member of the public" means any individual who ~~that~~ can receive a radiation dose in the general environment, whether or not the individual is ~~he~~ ~~may or may not~~ also ~~be~~ exposed to radiation in an occupation associated with a nuclear fuel cycle. However, an individual is not considered a member of the public during any period in which that individual ~~he~~ is engaged in carrying out any operation that ~~which~~ is part of a nuclear fuel cycle.

"Nuclear fuel cycle" means the operations defined to be associated with the production of electrical power for public use by any fuel cycle through utilization of nuclear energy.

"Organ" means any human organ exclusive of the dermis, the epidermis, or the cornea.

"Site" means the area contained within the boundary of a location under the control of persons possessing or using radioactive material on which ~~is conducted~~ one or more operations covered by this Part is conducted ~~part~~.

"Uranium fuel cycle" means the operations of milling of uranium ore, chemical conversion of uranium, isotopic enrichment of uranium, fabrication of uranium fuel, generation of electricity by a light-water-cooled nuclear power plant using uranium fuel, and reprocessing of spent uranium fuel, to the extent that these directly support the production of electrical power for public use utilizing nuclear energy. "Uranium fuel cycle"~~, but~~ excludes mining operations, operations at waste disposal sites, transportation of any radioactive material in support of these operations, and the reuse of recovered non-uranium~~nonuranium~~ special nuclear and byproduct~~by-product~~ materials from the cycle.

(Source: Amended at 47 Ill. Reg._____, effective _____)

Section 1000.403 Environmental Standards for Uranium Fuel Cycle

A person conducting operations ~~Operations~~ covered by this Subpart must conduct them in a way that provides ~~shall be conducted in such a manner as to provide~~ reasonable assurance that:

a) The annual dose equivalent does not exceed 25 millirems to the whole body, 75 millirems to the thyroid, and 25 millirems to any other organ of any member of the public as the result of exposures to planned discharges of radioactive materials, radon and its daughters excepted, to the general environment from uranium fuel cycle operations, and to radiation from these operations.

b) The total quantity of radioactive materials entering the general environment from the entire uranium fuel cycle, per gigawatt-year of electrical energy produced by the fuel cycle, contains less than 50,000 curies of krypton-85, 5 millicuries of iodine-129, and 0.5 millicuries combined of plutonium-239 and other alpha-emitting transuranic radionuclides with the half-lives ~~halflives~~ greater than one year.

(Source: Amended at 47 Ill. Reg._____, effective _____)

SUBPART E: RECORDS

Section 1000.501 Records

A person ~~All persons~~ subject to this Part must~~shall~~ submit to IEMA ~~the Department~~, for~~with respect to~~ any material or facility permitted or licensed by the NRC or for which an NRC permit or license is sought:

a) Preliminary Safety Analysis Report and Final Safety Analysis Report, as described in 10 CFR 50.34, incorporated by reference in Section 1000.202.

b) Application for Construction Permit and for all amendments to that permit~~thereto~~, including information required by 10 CFR 50.34a, 50.36, and 51.20, incorporated by reference in Section 1000.202.

c) Environmental Impact Appraisal, Draft and Final Environmental Impact Statement, Negative Declaration, or other document prepared by the NRC under 10 CFR 51, incorporated by reference in Section 1000.202.

d) Operating Permit and all amendments to that permit~~thereto~~, including Technical Specifications under 10 CFR 50.36a, incorporated by reference in Section 1000.202.

e) Application for Amendment to Operating License.

f) All data, records, and reports conducted by or for that person and submitted to the NRC for~~in connection with~~ determining or predicting radiation levels in the air in unrestricted areas or the type or amount of radioactive materials emitted into the air ~~conducted by or for such persons~~.

(Source: Amended at 47 Ill. Reg._____, effective _____)

Section 1000.502 Notification of Incidents

A~~All~~ person subject to this Part must~~shall~~ immediately notify IEMA by telephone ~~and telegraph, mailgram, or facsimile, the Manager of the Office of Nuclear Facility Safety of the Illinois Department of Nuclear Safety, 1035 Outer Park Drive, Springfield, Illinois 62704,~~ of any incident or condition arising from the use or possession of licensed materials or facilities or the conducting of licensed activities which may have caused or threatens to cause emissions or radiation levels exceeding~~in excess of~~ those allowed under this Part. IEMA's 24-hour Operations Center can be reached for notification of incidents at 1-217-782-7860.

(Source: Amended at 47 Ill. Reg._____, effective _____)

Section 1000.503 Other Provisions

a) The definitions specified ~~set out~~ in 35 Ill. Adm. Code 201.102 apply to this Part.

b) All persons subject to this Part are subject to the requirements and provisions of 35 Ill. Adm. Code 201.122, 201.123, ~~201.124,~~ 201.125, 201.126, 201.141, 201.150 and 201.151.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 1000.APPENDIX A Concentrations in Air Above Natural Background

Element (atomic number)	Isotope[1]		μCi/ml
Actinium (89)	AC 227	S	~~S~~8 x 10^{-14}
		I	~~I~~9 x 10^{-13}
	AC 228	S	~~AC 228S~~3 x 10^{-9}
		I	~~I~~6 x 10^{-10}
Americium (95)	Am 241 ~~S~~	S	2 x 10^{-13}
		I	~~I~~4 x 10^{-12}
	Am 242m	S	~~Am 242mS~~2 x 10^{-13}
		I	~~I~~9 x 10^{-12}

	Am 242	S	~~Am 242S~~1 x 10^{-9}
		I	~~I~~2 x 10^{-9}
	Am 243	S	~~Am 243S~~2 x 10^{-13}
		I	~~I~~4 x 10^{-12}
	Am 244	S	~~Am 244S~~1 x 10^{-7}
		I	~~I~~8 x 10^{-7}
Antimony	Sb 122	S	~~S~~6 x 10^{-9}
		I	~~I~~5 x 10^{-9}
	Sb 124	S	~~Sb 124S~~5 x 10^{-9}
		I	~~I~~7 x 10^{-10}
	Sb 125	S	~~Sb 125S~~2 x 10^{-8}
		I	~~I~~9 x 10^{-10}
Argon (18)	A 37	Sub[2]	~~Sub[2]~~1 x 10^{-4}
	A 41	Sub	~~A 41Sub4~~ x 10^{-8}
Arsenic (33)	As 73	S	~~S~~7 x 10^{-8}
		I	~~I~~1 x 10^{-8}
	As 74	S	~~As 74S~~1 x 10^{-8}
		I	~~I~~4 x 10^{-9}
	As 76	S	~~As 76S4~~ x 10^{-9}
		I	~~I~~3 x 10^{-9}
	As 77	S	~~As 77S~~2 x 10^{-8}
		I	~~I~~1 x 10^{-8}
Astatine (85)	At 211	S	2 x 10^{-10}
		I	1 x 10^{-9}
Barium (56)	Ba 131	S	4 x 10^{-8}
		I	1 x 10^{-8}
	Ba 140	S	~~Ba 140S4~~ x 10^{-9}
		I	1 x 10^{-9}
Berkelium (97)	Bk 249	S	3 x 10^{-11}
		I	4 x 10^{-9}
	Bk 250	S	5 x 10^{-9}
		I	4 x 10^{-8}
Berylium (4)	Be 7	S	2 x 10^{-7}
		I	4 x 10^{-8}
Bismuth (83)	Bi 206	S	6 x 10^{-9}
		I	5 x 10^{-9}
	Bi 207	S	6 x 10^{-9}
		I	5 x 10^{-10}
	Bi 210	S	2 x 10^{-10}
		I	2 x 10^{-10}
	Bi 212	S	3 x 10^{-9}
		I	7 x 10^{-9}
Bromine (35)	Br 82	S	4 x 10^{-8}
		I	6 x 10^{-9}
Cadmium (48)	Cd 109	S	2 x 10^{-9}

		I	3×10^{-9}
	Cd 115m	S	1×10^{-9}
		I	1×10^{-9}
	Cd 115	S	8×10^{-9}
		I	6×10^{-9}
Calcium (20)	Ca 45	S	1×10^{-9}
		I	4×10^{-9}
	Ca 47	S	6×10^{-9}
		I	6×10^{-9}
Californium (98)	Cf 249	S	5×10^{-14}
		I	3×10^{-12}
	Cf 250	S	2×10^{-13}
		I	3×10^{-12}
	Cf 251	S	6×10^{-14}
		I	3×10^{-12}
	Cf 252	S	2×10^{-13}
		I	1×10^{-12}
	Cf 253	S	3×10^{-11}
		I	3×10^{-11}
	Cf 254	S	2×10^{-13}
		I	2×10^{-13}
Carbon (6)	C 14	S	1×10^{-7}
	(CO_2)	Sub	1×10^{-6}
Cerium (58)	Ce 141	S	2×10^{-8}
		I	5×10^{-9}
	Ce 143	S	9×10^{-9}
		I	7×10^{-9}
	Ce 144	S	3×10^{-10}
		I	2×10^{-10}
Cesium (55)	Cs 131	S	4×10^{-7}
		I	1×10^{-7}
	Cs 134m	S	1×10^{-6}
		I	2×10^{-7}
	Cs 134	S	1×10^{-9}
		I	4×10^{-10}
	Cs 135	S	2×10^{-8}
		I	3×10^{-9}
	Cs 136	S	1×10^{-8}
		I	6×10^{-9}
	Cs 137	S	2×10^{-9}
		I	5×10^{-10}
Chlorine (17)	Cl 36	S	1×10^{-8}
		I	8×10^{-10}
	Cl 38	S	9×10^{-8}
		I	7×10^{-8}

Chromium (24)	Cr 51	S	4×10^{-7}
		I	8×10^{-8}
Cobalt (27)	Co 57	S	1×10^{-7}
		I	6×10^{-9}
	Co 58m	S	6×10^{-7}
		I	3×10^{-7}
	Co 58	S	3×10^{-8}
		I	2×10^{-9}
	Co 60	S	1×10^{-8}
		I	3×10^{-10}
Copper (29)	Cu 64	S	7×10^{-8}
		I	4×10^{-8}
Curium (96)	Cm 242	S	4×10^{-12}
		I	6×10^{-12}
	Cm 243	S	2×10^{-13}
		I	3×10^{-12}
	Cm 244	S	3×10^{-13}
		I	3×10^{-12}
	Cm 245	S	2×10^{-13}
		I	4×10^{-12}
	Cm 246	S	2×10^{-13}
		I	4×10^{-12}
	Cm 247	S	2×10^{-13}
		I	4×10^{-12}
	Cm 248	S	2×10^{-14}
		I	4×10^{-13}
	Cm 249	S	4×10^{-7}
		I	4×10^{-7}
Dysprosium (66)	Dy 165	S	9×10^{-8}
		I	7×10^{-8}
	Dy 166	S	8×10^{-9}
		I	7×10^{-9}
Einsteinium (99)	Es 253	S	3×10^{-11}
		I	2×10^{-11}
	Es 254m	S	2×10^{-10}
		I	2×10^{-10}
	Es 254	S	6×10^{-13}
		I	4×10^{-12}
	Es 255	S	2×10^{-11}
		I	1×10^{-11}
Erbium (68)	Er 169	S	2×10^{-8}
		I	1×10^{-8}
	Er 171	S	2×10^{-8}
		I	2×10^{-8}
Europium (63)	Eu 152	S	1×10^{-8}

	(T/2 = 9 2 hrs)	I	1×10^{-8}
	Eu 152	S	4×10^{-10}
	(T/2 = 13 yrs)	I	6×10^{-10}
	Eu 154	S	1×10^{-10}
		I	2×10^{-10}
	Eu 155	S	3×10^{-9}
		I	3×10^{-9}
Fermium (100)	Fm 254	S	2×10^{-9}
		I	2×10^{-9}
	Fm 255	S	6×10^{-10}
		I	4×10^{-10}
	Fm 256	S	1×10^{-10}
		I	6×10^{-11}
Fluorine (9)	F 18	S	2×10^{-7}
		I	9×10^{-8}
Gadolinium (64)	Gd 153	S	8×10^{-9}
		I	3×10^{-9}
	Gd 159	S	2×10^{-8}
		I	1×10^{-8}
Gallium (31)	Ga 72	S	8×10^{-9}
		I	6×10^{-9}
Germanium (32)	Ge 71	S	4×10^{-7}
		I	2×10^{-7}
Gold (79)	Au 196	S	4×10^{-8}
		I	2×10^{-8}
	Au 198	S	1×10^{-8}
		I	8×10^{-9}
	Au 199	S	4×10^{-8}
		I	3×10^{-8}
Hafnium (72)	Hf 181	S	1×10^{-9}
		I	3×10^{-9}
Holmium (67)	Ho 166	S	7×10^{-9}
		I	6×10^{-9}
Hydrogen (1)	H3	S	2×10^{-7}
		I	2×10^{-7}
		Sub	4×10^{-5}
Indium (49)	In 113m	S	3×10^{-7}
		I	2×10^{-7}
	In 114m	S	4×10^{-9}
		I	7×10^{-10}
	In 115m	S	8×10^{-8}
		I	6×10^{-8}
	In 115	S	9 x~~X~~ 10^{-9}
		I	1×10^{-9}
Iodine (53)	I 125	S	8×10^{-11}

		I	6×10^{-9}
	I 126	S	9×10^{-11}
		I	1×10^{-8}
	I 129	S	2×10^{-11}
		I	2×10^{-9}
	I 131	S	1×10^{-10}
		I	1×10^{-8}
	I 132	S	3×10^{-9}
		I	3×10^{-8}
	I 133	S	4×10^{-10}
		I	7×10^{-9}
	I 134	S	6×10^{-9}
		I	1×10^{-7}
	I 135	S	1×10^{-9}
		I	1×10^{-8}
Iridium (77)	Ir 190	S	4×10^{-8}
		I	1×10^{-8}
	Ir 192	S	4×10^{-9}
		I	9×10^{-10}
	Ir 194	S	8×10^{-9}
		I	5×10^{-9}
Iron (26)	Fe 55	S	3×10^{-8}
		I	3×10^{-8}
	Fe 59	S	5×10^{-9}
		I	2×10^{-9}
Krypton (36)	Kr 85m	Sub	1×10^{-7}
	Kr 85	Sub	3×10^{-7}
	Kr 87	Sub	2×10^{-8}
	Kr 88	Sub	2×10^{-8}
Lanthanum (57)	La 140	S	5×10^{-9}
		I	4×10^{-9}
Lead (82)	Pb 203	S	9×10^{-8}
		I	6×10^{-8}
	Pb 210	S	4×10^{-12}
		I	8×10^{-12}
	Pb 212	S	6×10^{-10}
		I	7×10^{-10}
Lutetium (71)	Lu 177	S	2×10^{-8}
		I	2×10^{-8}
Manganese (25)	Mn 52	S	7×10^{-9}
		I	5×10^{-9}
	Mn 54	S	1×10^{-8}
		I	1×10^{-9}
	Mn 56	S	3×10^{-8}
		I	2×10^{-8}

Mercury (80)	Hg 197m	S	3×10^{-8}
		I	3×10^{-8}
	Hg 197	S	4×10^{-8}
		I	9×10^{-8}
	Hg 203	S	2×10^{-9}
		I	4×10^{-9}
Molybdenum (42)	Mo 99	S	3×10^{-8}
		I	7×10^{-9}
Neodymium (60)	Nd 144	S	3×10^{-12}
		I	1×10^{-11}
	Nd 147	S	1×10^{-8}
		I	8×10^{-9}
	Nd 149	S	6×10^{-8}
		I	5×10^{-8}
Neptunium (93)	Np 237	S	1×10^{-13}
		I	4×10^{-12}
	Np 239	S	3×10^{-8}
		I	2×10^{-8}
Nickel (28)	Ni 59	S	2×10^{-8}
		I	3×10^{-8}
	Ni 63	S	2×10^{-9}
		I	1×10^{-8}
	Ni 65	S	3×10^{-8}
		I	2×10^{-8}
Niobium (Columbium) (41)	Nb 93m	S	4×10^{-9}
		I	5×10^{-9}
	Nb 95	S	2×10^{-8}
		I	3×10^{-9}
	Nb 97	S	2×10^{-7}
		I	2×10^{-7}
Osmium (76)	Os 185	S	2×10^{-8}
		I	2×10^{-9}
	Os 191m	S	6×10^{-7}
		I	3×10^{-7}
	Os 191	S	4×10^{-8}
		I	1×10^{-8}
	Os 193	S	1×10^{-8}
		I	9×10^{-9}
Palladium (46)	Pd 103	S	5×10^{-8}
		I	3×10^{-8}
	Pd 109	S	2×10^{-8}
		I	1×10^{-8}
Phosphorus (15)	P 32	S	2×10^{-9}
		I	3×10^{-9}

Platinum (78)	Pt 191	S	3×10^{-8}
		I	2×10^{-8}
	Pt 193m	S	2×10^{-7}
		I	2×10^{-7}
	Pt 193	S	4×10^{-8}
		I	1×10^{-8}
	Pt 197m	S	2×10^{-7}
		I	2×10^{-7}
	Pt 197	S	3×10^{-8}
		I	2×10^{-8}
Plutonium (94)	Pu 238	S	7×10^{-14}
		I	1×10^{-12}
	Pu 239	S	6×10^{-14}
		I	1×10^{-12}
	Pu 240	S	6×10^{-14}
		I	1×10^{-12}
	Pu 241	S	3×10^{-12}
		I	1×10^{-9}
	Pu 242	S	6×10^{-14}
		I	1×10^{-12}
	Pu 243	S	6×10^{-8}
		I	8×10^{-8}
	Pu 244	S	6×10^{-14}
		I	1×10^{-12}
Polonium (84)	Po 210	S	2×10^{-11}
		I	7×10^{-12}
Potassium (19)	K 42	S	7×10^{-8}
		I	4×10^{-9}
Praseodymium (59)	Pr 142	S	7×10^{-9}
		I	5×10^{-9}
	Pr 143	S	1×10^{-8}
		I	6×10^{-9}
Promethium (61)	Pm 147	S	2×10^{-9}
		I	3×10^{-9}
	Pm 149	S	1×10^{-8}
		I	8×10^{-9}
Protoactinium (91)	Pa 230	S	6×10^{-11}
		I	3×10^{-11}
	Pa 231	S	4×10^{-14}
		I	4×10^{-12}
	Pa 233	S	2×10^{-8}
		I	6×10^{-9}
Radium (88)	Ra 223	S	6×10^{-11}
		I	8×10^{-12}
	Ra 224	S	2×10^{-10}

		I	2×10^{-11}
	Ra 226	S	3×10^{-12}
		I	2×10^{-12}
	Ra 228	S	2×10^{-12}
		I	1×10^{-12}
Radon (86)	Rn 220	S	1×10^{-8}
	Rn 222[3]	I ~~3×10^{-9}~~	3×10^{-9}
Rhenium (75)	Re 183	S	9×10^{-8}
		I	5×10^{-9}
	Re 186	S	2×10^{-8}
		I	8×10^{-9}
	Re 187	S	3×10^{-7}
		I	2×10^{-8}
	Re 188	S	1×10^{-8}
		I	6×10^{-9}
Rhodium (45)	Rh 103m	S	3×10^{-6}
		I	2×10^{-6}
	Rh 105	S	3×10^{-8}
		I	2×10^{-8}
Rubidium (37)	Rb 86	S	1×10^{-8}
		I	2×10^{-9}
	Rb 87	S	2×10^{-8}
		I	2×10^{-9}
Ruthenium (44)	Ru 97	S	8×10^{-8}
		I	6×10^{-8}
	Ru 103	S	2×10^{-8}
		I	3×10^{-9}
	Ru 105	S	2×10^{-8}
		I	2×10^{-8}
	Ru 106	S	3×10^{-9}
		I	2×10^{-10}
Samarium (62)	Sm 147	S	2×10^{-12}
		I	9×10^{-12}
	Sm 151	S	2×10^{-9}
		I	5×10^{-9}
	Sm 153	S	2×10^{-8}
		I	1×10^{-8}
Scandium (21)	Sc 46	S	8×10^{-9}
		I	8×10^{-10}
	Sc 47	S	2×10^{-8}
		I	2×10^{-8}
	Sc 48	S	6×10^{-9}
		I	5×10^{-9}
Selenium (34)	Se 75	S	4×10^{-8}
		I	4×10^{-9}

Silicon (14)	Si 31	S	2×10^{-7}
		I	3×10^{-8}
Silver (47)	Ag 105	S	2×10^{-8}
		I	3×10^{-9}
	Ag 110m	S	7×10^{-9}
		I	3×10^{-10}
	Ag 111	S	1×10^{-8}
		I	8×10^{-9}
Sodium (11)	Na 22	S	6×10^{-9}
		I	3×10^{-10}
	Na 24	S	4×10^{-8}
		I	5×10^{-9}
Strontium (38)	Sr 85m	S	1×10^{-6}
		I	1×10^{-6}
	Sr 85	S	8×10^{-9}
		I	4×10^{-9}
	Sr 89	S	3×10^{-10}
		I	1×10^{-9}
	Sr 90	S	3×10^{-11}
		I	2×10^{-10}
	Sr 91	S	2×10^{-8}
		I	9×10^{-9}
	Sr 92	S	2×10^{-8}
		I	1×10^{-8}
Sulfur (16)	S 35	S	9×10^{-9}
		I	9×10^{-9}
Tantalum (73)	Ta 182	S	1×10^{-9}
		I	7×10^{-10}
Technetium (43)	Tc 96m	S	3×10^{-6}
		I	1×10^{-6}
	Tc 96	S	2×10^{-8}
		I	8×10^{-9}
	Tc 97m	S	8×10^{-8}
		I	5×10^{-9}
	Tc 97	S	4×10^{-7}
		I	1×10^{-8}
	Tc 99m	S	1×10^{-6}
		I	5×10^{-7}
	Tc 99	S	7×10^{-8}
		I	2×10^{-9}
Tellurium (52)	Te 125m	S	1×10^{-8}
		I	4×10^{-9}
	Te 127m	S	5×10^{-9}
		I	1×10^{-9}
	Te 127	S	6×10^{-8}

		I	3×10^{-8}
	Te 129m	S	3×10^{-9}
		I	1×10^{-9}
	Te 129	S	2×10^{-7}
		I	1×10^{-7}
	Te 131m	S	1×10^{-8}
		I	6×10^{-9}
	Te 132	S	7×10^{-9}
		I	4×10^{-9}
Terbium (65)	Tb 160	S	3×10^{-9}
		I	1×10^{-9}
Thallium (81)	Tl 200	S	9×10^{-8}
		I	4×10^{-8}
	Tl 201	S	7×10^{-8}
		I	3×10^{-8}
	Tl 202	S	3×10^{-8}
		I	8×10^{-9}
	Tl 204	S	2×10^{-8}
		I	9×10^{-10}
Thorium (90)	Th 227	S	1×10^{-11}
		I	6×10^{-12}
	Th 228	S	3×10^{-13}
		I	2×10^{-13}
	Th 230	S	8×10^{-14}
		I	3×10^{-13}
	Th 231	S	5×10^{-8}
		I	4×10^{-8}
	Th 232	S	1×10^{-12}
		I	1×10^{-12}
	Th natural	S	2×10^{-12}
		I	2×10^{-12}
	Th 234	S	2×10^{-9}
		I	1×10^{-9}
Thulium (69)	Tm 170	S	1×10^{-9}
		I	1×10^{-9}
	Tm 171	S	4×10^{-9}
		I	8×10^{-9}
Tin (50)	Sn 113	S	1×10^{-8}
		I	2×10^{-9}
	Sn 125	S	4×10^{-9}
		I	3×10^{-9}
Tungsten (Wolfram) (74)	W 181	S	8×10^{-8}
		I	4×10^{-9}
	W 185	S	3×10^{-8}
		I	4×10^{-9}

	W 187	S	2×10^{-8}
		I	1×10^{-8}
Uranium (92)	U 230	S	1×10^{-11}
		I	4×10^{-12}
	U 232	S	3×10^{-12}
		I	9×10^{-13}
	U 233	S	2×10^{-11}
		I	4×10^{-12}
	U 234	S[4]	2×10^{-11}
		I	4×10^{-12}
	U 235	S[4]	2×10^{-11}
		I	4×10^{-12}
	U 236	S	2×10^{-11}
		I	4×10^{-12}
	U 238	S[4]	3×10^{-12}
		I	5×10^{-12}
	U 240	S	8×10^{-9}
		I	6×10^{-9}
	U-natural	S[4]	5×10^{-12}
		I	5×10^{-12}
Vanadium (23)	V 48	S	6×10^{-9}
		I	2×10^{-9}
Xenon (54)	Xe 131m	Sub	4×10^{-7}
	Xe 133	Sub	3×10^{-7}
	Xe 133m	Sub	3×10^{-7}
	Xe 135	Sub	1×10^{-7}
Ytterbium (70)	Yb 175	S	2×10^{-8}
		I	2×10^{-8}
Yttrium (39)	Y 90	S	4×10^{-9}
		I	3×10^{-9}
	Y 91m	S	8×10^{-7}
		I	6×10^{-7}
	Y 91	S	1×10^{-9}
		I	1×10^{-9}
	Y 92	S	1×10^{-8}
		I	1×10^{-8}
	Y 93	S	6×10^{-9}
		I	5×10^{-9}
Zinc (30)	Zn 65	S	4×10^{-9}
		I	2×10^{-9}
	Zn 69m	S	1×10^{-8}
		I	1×10^{-8}
	Zn 69	S	2×10^{-7}
		I	3×10^{-7}
Zirconium (40)	Zr 93	S	4×10^{-9}

		I	1×10^{-8}
	Zr 95	S	4×10^{-9}
		I	1×10^{-9}
	Zr 97	S	4×10^{-9}
		I	3×10^{-9}
Any single radionuclide not listed above with decay mode other than alpha emission or spontaneous fission and with radioactive~~radio-active~~ half-life less than 2 hours.		Sub	3×10^{-6}
Any single radionuclide not listed above with decay mode other than alpha emission or spontaneous fission and with radioactive~~radio-active~~ half-life greater than 2 hours.			1×10^{-10}
Any single radionuclide not listed above, that ~~which~~ decays by alpha emission or spontaneous fission.			2×10^{-14}

[1]Soluble (S); Insoluble (I).

[2]"Sub" means that values given are for submersion in a semispherical infinite cloud of airborne material.

[3]These radon concentrations are appropriate for protection from radon-222 combined with its short-lived daughters. The value may be replaced by one-thirtieth (1/30) of a "working level." A "working level" is defined as any combination of short-lived radon-222 daughters, polonium-218, lead-214, bismuth-214 and polonium-214, in one liter of air, without regard to the degree of equilibrium, that will result in the ultimate emission of 1.3×10^5 MeV of alpha particle energy.

[4]For soluble mixtures of U-238, U-234 and U-235 in air chemical toxicity may be the limiting factor. The concentration value is 0.007 milligrams of uranium per cubic meter of air. The specific activity for natural uranium is 6.77×10^{-7} curies per gram U. The specific activity (SA) for other mixtures of U-238, U-235 and U-234, if not known, will ~~shall~~ be:

$SA = 3.6 \times 10^{-7}$ curies/gram U..... ..... U-depleted

$SA = (0.4 + 0.38\ E + 0.0034\ E^2)\ 10^{-6}$..... ... $E \geq$ ~~than~~ 0.72

where E is the percentage by weight of U-235, expressed as a percent.

NOTE: When~~In any case where there is~~ a mixture in air of more than one radionuclide exists, the limiting values ~~for purposes~~ of this Appendix should be determined as follows:

1. If the identity and concentration of each radionuclide in the mixture are known, the limiting values should be derived as follows: Determine, for each radionuclide in the mixture, the ratio between the quantity present in the mixture and the limit otherwise established in Appendix A for the specific radionuclide when not in a mixture. The sum of the~~such~~ ratios for all the radionuclides in the mixture may not exceed "1" (i.e., "unity").

   EXAMPLE: If radionuclides A, B, and C are present in concentrations C_A, C_B, C_C, and if the applicable MPCs~~MPC's~~ are MPC_A, and MPC_B, and MPC_C respectively, then the concentrations must~~shall~~ be limited so that the following relationship exists:

   $$(C_A/MPC_A) + (C_B/MPC_B) + (C_C/MPC_C) \leq \text{~~than~~ } 1$$

2. If either the identity or the concentration of any radionuclide in the mixture is not known, the limiting values ~~for purposes~~ of Appendix A must~~shall~~ be 2×10^{-14}.

3. If any of the conditions specified below are met, the corresponding values specified below may be used instead~~in lieu~~ of those specified in paragraph 2 above.

   a. If the identity of each radionuclide in the mixture is known but the concentration of one or more of the radionuclides in the mixture is not known, the concentration limit for the mixture is the limit specified in Appendix A for the radionuclide in the mixture having the lowest concentration limit; or

   b. If the identity of each radionuclide in the mixture is not ~~now~~ known~~,~~ but it is known that ~~certain~~ radionuclides specified in Appendix A are not present in the mixture, the concentration limit for the mixture is the lowest concentration limit specified in Appendix A for any radionuclide that~~which~~ is not known to be absent from the mixture; or

   c. Element (atomic number) and isotope. μCi/ml

      If it is known that alpha-emitters and Sr 90, I 129, Pb 210, Ac 227, Ra 228, Pa 230, Pu 241, and Bk 249 are not present. 1×10^{-10}

If it is known that alpha-emitters and Pb 210, Ac 227, Ra 228, and Pu 241 are not present.	1×10^{-11}
If it is known that alpha-emitters and Ac 227 are not present.	1×10^{-12}
If it is known that Ac 227, Th 230, Pa 231, Pu 238, Pu 239, Pu 240, Pu 242, Pu 244, Cm 248, Cf 249 and Cf 251 are not present.	1×10^{-13}

4. If a mixture of radionuclides consists of uranium and its daughters in ore dust before ~~prior to~~ chemical separation of the uranium from the ore, the following values may be used for uranium and its daughters through radium-226, instead of those from paragraphs 1, 2, or 3 above:

   3×10^{-12} μCi/ml gross alpha activity; 2×10^{-12} μCi/ml natural uranium; or 3 micrograms per cubic meter of air natural uranium.

5. For ~~purposes of~~ this note, a radionuclide may be considered as not present in a mixture if:

   a.~~(a)~~ the ratio of the concentration of that radionuclide in the mixture (C_A) to the concentration limit for that radionuclide specified in Appendix A (MPC_A) does not exceed 1/10 (i.e., $C_A/MPC_A \leq$ ~~than~~ 1/10), and

   b.~~(b)~~ the sum of such ratios for all the radionuclides considered as not present in the mixtures does not exceed 1/4~~,~~ (i.e., ($C_A/MPC_A + C_B/MPC_B.+ \leq$ …~~than~~ 1/4).

   (Source: Amended at 47 Ill. Reg._____, effective _____)

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE I: ATOMIC RADIATION
CHAPTER I: POLLUTION CONTROL BOARD

PART 1010
PROCEDURES FOR REPORTING RELEASES OF RADIONUCLIDES AT NUCLEAR POWER PLANTS

SUBPART A: GENERAL PROVISIONS

Section
1010.100 Purpose

SUBPART B: REPORTING

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._____, effective_____.

SUBPART A: GENERAL PROVISIONS

Section 1010.100 Purpose

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

(Source: Amended at 47 Ill. Reg._____, effective _____)

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 are~~shall be~~ the same as that applied to the same words or terms in the Illinois Environmental Protection Act [415 ILCS 5].

"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 that produces 37 billion nuclear transformations per second.

"Groundwater" means underground water which ~~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 5/3.210~~3.64~~]

"IEMA" means the Illinois Emergency Management Agency, Division of Nuclear Safety.

"L" means liter.

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

"Licensee-controlled~~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 that produces ~~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~~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.

"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~~,~~ if~~provided~~ the discharge is authorized in the nuclear power plant's United States Nuclear Regulatory Commission operating license.

(Source: Amended at 47 Ill. Reg._____, effective _____)

Section 1010.108 Severability

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

(Source: Amended at 47 Ill. Reg._____, effective _____)

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 compliance~~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~~station generated~~ liquids and concentrations or quantities of radionuclides released, not on the volumes of station-generated~~station generated~~ liquids and concentrations or quantities of radionuclides remaining after the initiation or completion of response actions~~)~~. The~~If the release is required to be reported, the~~ licensee must report the release in compliance~~accordance~~ with Section 1010.202 if the unpermitted release of station-generated liquids either results:~~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~~licensee controlled~~ area or ~~.~~

~~b)~~ ~~Licensees must report unpermitted releases of station generated liquids that~~ contains~~contain~~ tritium at quantities of 0.002 curies ~~Curies~~ or more.

(Source: Amended at 47 Ill. Reg._____, effective _____)

Section 1010.202 Reporting of Releases

a) Reports required by~~under~~ Section 1010.200 must be made ~~given~~ within 24 hours after the release to both the Agency and IEMA in compliance~~accordance~~ with the following:

1) Reports to the Agency must be made~~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 made~~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 must~~shall~~ consult with IEMA in developing the forms and format for electronic reports required under this Section.

b) Reporting~~Reports~~ required by ~~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 (in electronic reports), and telephone number of the principal executive officerPrincipal Executive Officer for the nuclear power plant or the principal executive officer's 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-generatedstation 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 Curies);

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, due toas 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.

(Source: Amended at 47 Ill. Reg._____, effective _____)

Section 1010.204 Follow-up Written Report

A licenseeAn owner or operator 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~~, at a minimum,~~ 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 ~~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~~Principal Executive Officer~~ for the nuclear power plant or the principal executive officer's~~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:

Illinois Environmental Protection Agency
Bureau of Water
Groundwater Section
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL~~l~~ 62794-9276

Illinois Emergency Management Agency
Division of Nuclear Safety

~~Bureau of Environmental Safety~~
1035 Outer Park Drive
Springfield, IL~~l~~ 62704

c) The Agency must~~shall~~ consult with IEMA in developing the forms and format for reports required under this Section.

d)~~c)~~ The Agency must post copies of the follow-up reports it receives under this Section on the Agency's website.

(Source: Amended at 47 Ill. Reg._____, effective _____)