

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF: )  
)  
PROCEDURES REQUIRED BY ) R 07-020  
P.A. 94-849 FOR REPORTING ) (Rulemaking - Water)  
RELEASES OF RADIONUCLIDES AT )  
NUCLEAR POWER PLANTS: NEW 35 )  
ILL.ADM.CODE PART 1010 )

NOTICE OF FILING

To:

Clerk  
Illinois Pollution Control Board  
James R. Thompson Center  
100 West Randolph Street, Suite 11-500  
Chicago, Illinois 60601

Marie Tipsord, Hearing Officer  
Illinois Pollution Control Board  
James R. Thompson Center  
100 West Randolph Street, Suite 11-500  
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PLEASE TAKE NOTICE that today I filed with the Illinois Pollution Control Board the  
Submission of Information Listed in 35 Ill. Adm. Code 102.202(b), a copy of which is herewith  
served upon you.

ILLINOIS ENVIRONMENTAL  
PROTECTION AGENCY

Dated: September 26, 2007  
1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, Illinois 62794-9276  
(217) 782-5544

By: /s/ Kyle Rominger  
Kyle Rominger  
Assistant Counsel

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SUBMISSION OF INFORMATION LISTED IN 35 ILL. ADM. CODE 102.202(b)

NOW COMES the Illinois Environmental Protection Agency ("Illinois EPA") and, pursuant to the Hearing Officer's request at the September 5, 2007, hearing in this matter, submits the following information listed in 35 Ill. Adm. Code 102.202(b). The information is roughly organized according to the order in which it is listed in 35 Ill. Adm. Code 102.202(b). As discussed with the Hearing Officer, the Illinois EPA has not included Illinois Register notice pages, an Illinois Register version of the rules, or an economic and budgetary effects analysis form since these items are not required under 35 Ill. Adm. Code 102.202.

1. A statement of the facts that support the proposal:

The Illinois EPA submits this proposal pursuant to Public Act 94-849 ("P.A. 94-849"), which added Section 13.6 to the Environmental Protection Act ("Act"). Section 13.6 of the Act requires the Illinois EPA, in consultation with the Illinois Emergency Management Agency ("IEMA"), to "propose rules to the Board prescribing standards for detecting and reporting unpermitted releases of radionuclides." 415 ILCS 5/13.6(e).

Section 13.6 was added to the Act "to require the detection and reporting of unpermitted releases of any radionuclides into groundwater, surface water, or soil at nuclear power plants, to the extent that federal law or regulation does not preempt such requirements." 415 ILCS

5/13.6(a). It carries out this purpose by requiring that “[w]ithin 24 hours after an unpermitted release of a radionuclide from a nuclear power plant, the owner or operator of the nuclear power plant where the release occurred shall report the release to the [Illinois Environmental Protection] Agency and the Illinois Emergency Management Agency.” 415 ILCS 5/13.6(c). An “unpermitted release of a radionuclide” is defined as “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).

Section 13.6 was added to the Act following a series of leaks at the Braidwood Nuclear Power Station (“Braidwood Station”) in Will County, Illinois. The leaks involved releases of tritiated water from several vacuum breakers along an underground pipe known as the “blowdown line.” The blowdown line carries tritiated water and other liquid effluent from the Braidwood Station to the Kankakee River, where it is discharged. The tritium leaks resulted in groundwater contamination and impacted a nearby residential well. Other nuclear power stations in Illinois have also experienced tritium leaks that have resulted in groundwater contamination.

2. A statement of the purpose and effect of the proposal:

The purpose of the proposal is to comply with Section 13.6 of the Act and propose rules that set forth standards for detecting and reporting unpermitted releases of radionuclides under Section 13.6 of the Act. Under Section 1010.200 of the rules, an unpermitted release of a radionuclide is deemed to have been detected if an unpermitted release of station generated liquids either (i) results in tritium concentrations of 200 pCi/L or more outside the licensee controlled area or (ii) contains tritium at quantities of 0.002 Curies or more. The procedural requirements for reporting the release are set forth in Sections 1010.202 and 1010.204 of the rules.

The effect of the proposal will be to establish standards for owners and operators of nuclear power plants to comply with the release reporting requirements of Section 13.6 of the Act so that the Illinois EPA and IEMA receive timely notification of unpermitted releases of radionuclides from nuclear power plants.

a. Environmental justification:

The proposed rules help alert appropriate state agencies to the fact that a release of radionuclides from a nuclear power plant has occurred, and helps protect against degradation of the State's water resources. The detection and reporting levels set forth in Section 1010.200 are based on tritium levels that result in, or that could result in, off-site tritium concentrations exceeding background levels. Please see the technical justification section below for the reasons 200 pCi/L is proposed as the detection level for tritium instead of the background level of 35 pCi/L.

b. Technical justification:

The requirement for reporting unpermitted releases of radionuclides is established in Section 13.6 of the Act. The proposed rules further refine when the reporting requirement is triggered. The detection and reporting levels set forth in Section 1010.200 were chosen to ensure that releases are reported if they result, or could result, in off-site tritium concentrations that exceed background levels.

Based on information from the Braidwood Station, the background level for tritium is 35 pCi/L. However, the practical quantitation limit that can be achieved in commercial, State, and private laboratories (other than research laboratories) is 200 pCi/L. Therefore, the reporting levels are based upon the practical quantitation limit 200 pCi/L. Tritium levels in the vicinity of

a nuclear power plant that equal or exceed this concentration are assumed to be the result of a release from the nuclear power plant.

0.002 Curies was chosen as a detection and reporting level because of its proactive and practical utility. It is a measure that on-site Exelon staff is familiar with, and one that can be easily determined without analytical testing. It is used in lieu of requiring the modeling of each on-site release to determine whether the release might result in tritium concentrations of 200 pCi/L or more outside of the licensee controlled area. Based on Illinois EPA modeling, releases of tritium in quantities of less than 0.002 Curies are not expected to result in tritium concentrations of 200 pCi/L or more outside the licensee controlled areas of the nuclear power plants in Illinois.

c. Economic justification:

From an economic standpoint, the Illinois EPA does not believe the proposed rules create unreasonable standards for owners and operators to follow to comply with Section 13.6 of the Act. The Illinois EPA believes that any additional costs owners and operators of nuclear power plants incur in order to comply with the rules will be reasonable when compared to the public benefit of providing timely notification of radionuclide releases to the Illinois EPA and IEMA, and ultimately to the public. At the September 5, 2007, hearing, Exelon stated that any additional costs it incurs to comply with the proposed rules will be reasonable.

3. Applicable factors listed in Section 27(a) of the Act:

The proposed rules do not contain different provisions for different contaminant sources, or for different geographical areas. They do not apply to sources outside the State; do not make special provision for alert and abatement standards and procedures respecting occurrences or emergencies of pollution or other short-term conditions constituting an acute danger to health or

to the environment (the rules do not contain special provisions because they address only one issue: the detection and reporting of unpermitted releases of radionuclides); and do not include regulations specific to individual persons or sites. The proposed regulations do not establish or assess any charge by the Board or the Agency.

Regarding the physical conditions and character of the areas involved, the nuclear power plant sites in Illinois range from several hundred acres to several thousand acres in size. Surrounding land uses range from agricultural and recreational uses to commercial and residential uses. The power plants are either adjacent to or near larger bodies of water such as large ponds, lakes, and rivers. Detailed information regarding five of the seven nuclear power plants in Illinois is included in the "Station Description" portion (Section 2.0 et seq.) of the reports submitted to the Board on September 17, 2007.

4. Affected sources and facilities:

The proposed rules apply to owners and operators of nuclear power plants. Currently, Exelon owns and operates all of the nuclear power plants located in Illinois. The universe of affected sources and facilities consists of the following:

- a. Braidwood Generating Station, Braceville, Illinois
- b. Byron Generating Station, Byron, Illinois
- c. Clinton Power Station, Clinton, Illinois
- d. Dresden Generating Station, Morris, Illinois
- e. LaSalle County Generating Station, Marseilles, Illinois
- f. Quad Cities Generating Station, Cordova, Illinois
- g. Zion Generating Station, Zion, Illinois

5. Economic impact of the proposed rule:

Exelon testified to the economic impact of the proposed rules at the September 5, 2007, hearing. It stated that any additional costs it incurs to comply with the rules will be reasonable. See Transcript of September 5, 2007, hearing at 48-49.

The Illinois EPA will be happy to answer any additional questions the Board may have about its proposal at the October 10, 2007, hearing in Springfield.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL  
PROTECTION AGENCY

/s/ Kyle Rominger

Kyle Rominger  
Assistant Counsel

DATED: September 26, 2007  
1021 North Grand Avenue East  
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Springfield, Illinois 62794-9276  
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PROOF OF SERVICE

I, the undersigned, certify that I have served the enclosed Submission of Information

Listed in 35 Ill. Adm. Code 102.202(b) upon the following persons:

Clerk  
Illinois Pollution Control Board  
James R. Thompson Center  
100 West Randolph Street, Suite 11-500  
Chicago, Illinois 60601  
(electronically filed)

Marie Tipsord, Hearing Officer  
Illinois Pollution Control Board  
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Chicago, IL 60603

by sending a true and correct copy of the documents to the above addresses via first-class mail  
from Springfield, Illinois, on the date below with sufficient postage affixed.

ILLINOIS ENVIRONMENTAL  
PROTECTION AGENCY

By: /s/ Kyle Rominger  
Kyle Rominger  
Assistant Counsel

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