

P3
From: John House
To: Anne Boland
Date: 12/29/05 2:31 PM
Subject: Braidwood Tritium

Anne:

Steve made a change (addition) to the first paragraph.

John

Information in this record was deleted
in accordance with the Freedom of Information
Act, exemptions 5
FOIA- 2006-115

G-99

RESPONSE

The liquid effluent concentration release limit to the environment for tritium (Part 20, Appendix B) is 1,000,000 Picocuries/Liter. This is the NRC effluent release concentration limit. In addition to the release concentration limit, there are ALARA dose control values contained in the licensee's Technical Specifications that hold the effluent discharges to Appendix I of Part 50 values. Appendix I states that a licensee is to control radioactive effluents ALARA; for liquid effluents (total) this means they have to keep the annual dose to any member of the public within 3 millirem to the total body or 10 millirem to any organ.

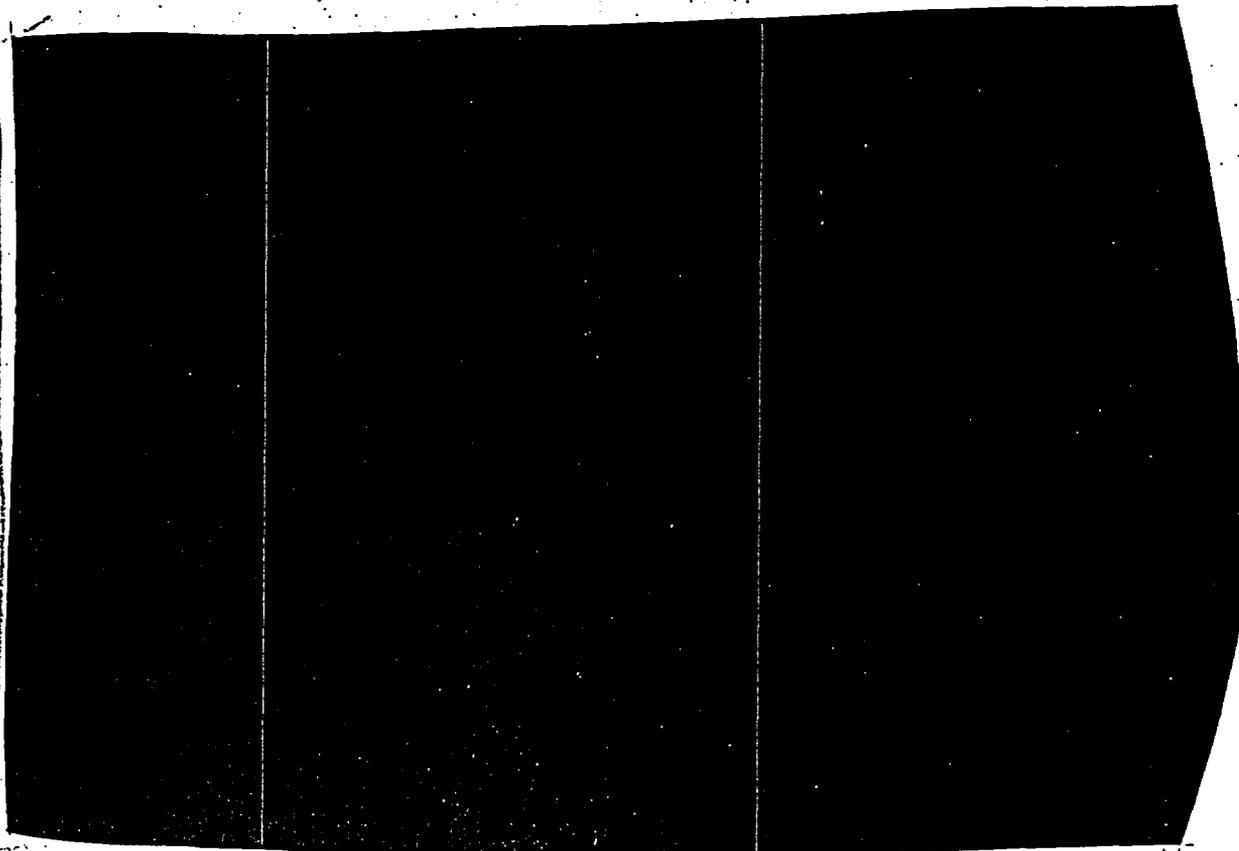
The EPA drinking water limit is 20,000 picocuries/Liter. The EPA has determined that this correlates to a radiological exposure of 4 millirem per year.

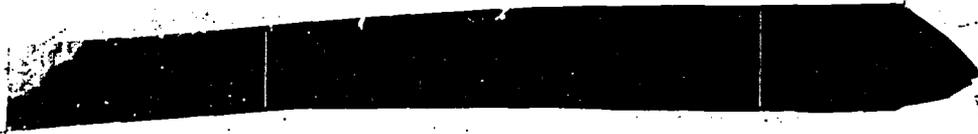
In addition, the licensee's technical specifications specifies that calendar quarter dose limits for liquid effluents are 1.5 millirem total body and 5 millirem to any organ.

The highest tritium concentration seen in a property-owner's well was approximately 1500 picocuries per liter. This is much less than the EPA drinking water standard and the dose to an individual consuming this water would be negligible, about 0.3 millirem using the EPA dose-concentration relationship.

There have been no health or safety issues identified at this point as a result of the tritium spill.

Braidwood 1998/2000 spills





EFS

The NRC is aware that the State of Illinois issued a NOV to Braidwood concerning the tritium. The licensee is developing remediation plans that will be submitted to the Illinois EPA in response to the NOV. The NRC will review the remediation plans during an upcoming inspection.