

**ILLINOIS  
POWER**

U- 601927  
L30-92(02-06)-LP  
1A.120

February 6, 1992

U. S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, D.C. 20555

Subject: Clinton Power Station  
Evaluation of Potential  
Transportation Accidents

Dear Sir:

The Clinton Power Station Updated Safety Analysis Report (USAR), Section 2.2.3, contains the commitment that Illinois Power will perform a survey every three years of all shipments of hazardous materials transportation on the Gilman Line of the Illinois Central Railroad. This survey will provide assurance that the existing transportation patterns have not changed significantly enough to have railroad transportation accidents considered a design basis accident. In addition, the USAR specifies that if the original acceptance limits of a toxic material have been exceeded, Illinois Power will provide, within six months, sensors that will isolate the control room heating, ventilating, and air conditioning system should the identified chemicals present a potential toxic environment. This letter fulfills the USAR commitment.

This update evaluates the risks of flammable and toxic hazards associated with railroad transportation past Clinton Power Station (CPS). The "rail traffic" of concern is on the Illinois Central Railroad Gilman Line which passes approximately 0.75 miles north of the Clinton Power Station. At Illinois Power's request, the Illinois Central Railroad completed a survey of rail traffic on the Gilman Line by reviewing their shipping records for the calendar year 1991. Hazardous materials are identified on the shipping record by a 49-series Standard Transportation Commodity Code (STCC) number. This code series includes flammable and toxic materials. Since Title 49 of the Code of Federal Regulations requires that hazardous materials must be identified on all shipping records, this survey of hazardous materials is deemed to be totally inclusive.

The Illinois Central Railroad survey indicated that the only hazardous materials shipped past the Clinton Power Station in 1991 were 104 carloads of phosphoric acid and eight carloads of anhydrous ammonia, as noted in the attachment to this letter. There were no shipments of flammable material on the Gilman Line in 1991. The total number of hazardous material shipments on the Gilman Line increased slightly since the 1988 hazardous material survey was performed. The Gilman Line is used only for local traffic carrying primarily grain and relatively insignificant amounts of hazardous material. Illinois Power believes there will be no significant increase in hazardous material traffic.

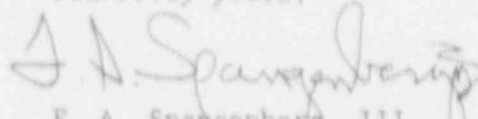
After identifying the hazardous materials transported on the Gilman Line in 1991, Illinois Power completed an assessment of the risks these materials might pose to the safe operation of CPS. Regulatory Guide 1.78, Revision 0, "Assumptions for Evaluating the Habitability of a Nuclear Power Plant Control Room During a Postulated Hazardous Chemical Release," specifies a control room habitability evaluation be conducted for each hazardous material shipped by rail with a frequency of 30 or more carloads per year. Since only eight carloads of anhydrous ammonia passed by CPS, a control room habitability analysis was not required. However, additional evaluation was required for the 104 carloads of phosphoric acid listed on the attachment.

As part of the evaluation of phosphoric acid, a review of Regulatory Guide 1.78 indicated that liquids with a vapor pressure of less than 10 torr may be eliminated from further consideration as a risk to plant operation. Based on information provided by the consignee of the phosphoric acid, it was determined that the 104 cars contained undiluted phosphoric acid consisting of 70% phosphorus pentoxide. This material is used to manufacture fertilizer. The vapor pressure of a 100% concentration of phosphoric acid is less than 10 torr at 100 degrees Fahrenheit. Additional evaluation of the risk to plant safety from phosphoric acid therefore is not required.

The results of this assessment demonstrate that the risks associated with railroad transportation hazards remain acceptably low and that installation of chemical sensors necessary to protect the main control room environment is not necessary.

If you have any questions or require additional information, please contact me.

Sincerely yours,



F. A. Spangenberg, III  
Manager, Licensing and Safety

JSP/alh

Attachment

cc: NRC Clinton Licensing Project Manager  
NRC Resident Inspector  
Regional Administrator, Region III, USNRC  
Illinois Department of Nuclear Safety

HAZARDOUS MATERIAL  
SHIPPED ON THE GILMAN LINE IN 1991

<u>STCC</u>	<u>MATERIAL</u>	<u>CARLOADS</u>
4930247	Phosphoric Acid	104
4904210	Anhydrous Ammonia	8