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UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
631 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

Docket Nos. 50-277
50-278

OCT 19 1979

Philadelphia Electric Company
ATTN: Mr. S. L. Daltroff
Vice President
Electric Production
2301 Market Street
Philadelphia, Pennsylvania 19101

Gentlemen:

Enclosed is IE Circular No. 79-21, "Prevention of Unplanned Releases of Radioactivity," which provides information on inadvertent releases/on-site spills of radioactivity. Should you have any questions related to the enclosed suggested preventive measures, please contact this office.

Sincerely,

James M. Alban
Boyce H. Grier
Director

Enclosures:

1. IE Circular No. 79-21
2. List of IE Circulars Issued in the Last Six Months

cc w/encls:

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ENCLOSURE 1

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT
WASHINGTON, D.C. 20555

October 19, 1979

IE Circular No. 79-21

PREVENTION OF UNPLANNED RELEASES OF RADIOACTIVITY

Numerous incidents of unplanned releases of radioactivity have been reported to the NRC within the past few months. These incidents of leaks, overflows and spills have resulted in contamination of areas outside of plant buildings. The attached table provides you with summary information on these events, their apparent causes, the radiological consequences and the corrective actions.

We believe that a number of these incidents could have been avoided and preventive actions for these types of unplanned releases should be instituted by all reactor licensees. Based on the reported incidents, the following preventive measures can minimize the occurrence of such events.

1. Review of procedures for transfer of radioactive liquids. Errors in written procedures have led to mistakes in valve line-ups and tank overflows. Written procedures, including check lists for valve line-ups, should be developed and followed for operations which could cause spills of radioactivity. Management controls, including audits, should be employed to assure verbatim compliance with such procedures.
2. Review of "as built" systems having the potential of inadvertent releases because of design or construction errors. Consider items such as:
 - a. Tank overflows should be routed to liquid radwaste tanks.
 - b. Storm drains should be located away from areas with a high potential for spills.
 - c. Consideration should be given to drip pans under equipment, such as pumps and valves, from which leakage is expected.
 - d. Cofferdams should be installed under doors to areas with a potential for radioactive spills.
 - e. Preoperational testing that would permit radioactive unit(s) under construction to be verified as safe for operation.
3. Periodically functionally test systems that could cause a corrosion degradation have occurred to cause leaks. New permanent

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