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

April 28, 1980

Docket Nos. 50-277
50-278

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

Gentlemen:

The enclosed IE Circular No. 80-09, "Problems with Plant Internal Communications System," is forwarded to you for information. No written response is required. If you desire additional information regarding this matter, please contact this office.

Sincerely,

for Robert T. Carlson
Boyce H. Grier
Director

Enclosures:
1. IE Circular No. 80-09
2. List of Recently Issued IE Circulars
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cc w/encls:
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Accession No.:
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT
WASHINGTON, D.C. 20555

DUPLICATE

IE Circular No. 80-09
April 28, 1980

PROBLEMS WITH PLANT INTERNAL COMMUNICATIONS SYSTEMS

Description of Circumstances at the Kewaunee Power Plant:

On January 17, 1980, the Kewaunee Nuclear Power Plant lost offsite power to its 4160V non-safeguards buses. Since the system used for internal communications, paging and evacuation alarm purposes (Gai-tronics) was powered from a non-safeguards bus, plant communications were degraded during the outage. This degraded condition persisted until power was restored to the affected bus thru an emergency safeguards bus. While in the degraded mode, the licensee used two-way portable radios for internal communications. The radios performed satisfactorily, per se; however, when transmitting in the vicinity of certain electronic equipment, they induced false signals into the electronic equipment.

Description of Circumstances at the Davis-Besse Power Station:

On October 15, 1979, the Davis-Besse Power Station lost all offsite power. During the period when offsite power was not available, the licensee noted that the internal three digit telephones (GTE) would not function. In addition, the NRC "Red Phone" was subsequently reported to have been out of service. Other licensee phone systems (Gai-tronics and the outside four digit Ohio Bell phones) did work.

Following this event, the licensee provided emergency power to its phones and the NRC took action through AT&T to provide emergency power to all Red Phones. (Note: Although the communications system at Davis-Besse was not designed to meet the single failure criterion, its FSAR states that the main internal communications system is supplied by two redundant power feeders from the uninterruptable instrumentation distribution panels.)

RECOMMENDED ACTION FOR LICENSEES AND HOLDERS OF CONSTRUCTION PERMITS

All licensees of nuclear power reactors and holders of construction permits should be aware of the potential problems described above. Because of the generic implications of the above problems, it is recommended that the following actions be considered:

1. Determine the source of power for plant internal communications systems;

2. Upgrade the internal communications systems to assure operability during the loss of offsite power or other foreseeable events;

3. Determine whether any plant electronic equipment may be adversely affected by portable radio transmissions. This determination should include, but not be limited to, the computer system, electro-hydraulic system, and nuclear instrumentation system; and

4. Instruct employees on the use of radios in areas susceptible to electromagnetic interference.

No written response to this Circular is required; however, if additional information regarding these matters is required, contact the Director of the appropriate NRC Regional Office.

ENCLOSURE 2

IE Circular No. 80-09
Date: April 28, 1980

RECENTLY ISSUED IE CIRCULARS

Circular No.	Subject	First Date of Issue	Issued To
79-24	Proper Installation and Calibration of Core Spray Pipe Break Detection Equipment on BWRs	11/26/79	All Power Reactor Licensees with an Operating License (OL) or Construction Permit (CP)
79-25	Shock Arrestor Strut Assembly Interference	12/20/79	All Power Reactor Facilities with an OL or CP
79-25 Supplement A	Shock Arrestor Strut Assembly Interference	1/31/80	All Power Reactor Facilities with an OL or CP
80-01	Service Advice for GE Induction Disc Relays	1/17/80	All Power Reactor Facilities with an OL or CP
80-02	Nuclear Power Plant Staff Work Hours	2/1/80	All Power and Research Reactors with an OL or CP
80-03	Protection from Toxic Gas Hazards	3/6/80	All Power Reactor Facilities with an OL
80-04	Securing Threaded Locking Devices on Safety-Related Equipment	3/14/80	All Power Reactor Facilities with an OL or CP
80-05	Emergency Diesel Generator Lubricating Oil Addition and Onsite Supply	4/1/80	All Power Reactor Facilities with an OL or CP
80-06	Control and Accountability Systems for Implant Therapy Sources	4/14/80	Medical Licensees in Categories G and G1
80-07	Problems with HPCI Turbine Oil System	4/3/80	All Power Reactor Facilities with an OL or CP
80-08	BWR Technical Specification Inconsistency - RPS Response Time	4/18/80	All General Electric BWRs holding a power reactor OL