

**PSEG Site  
ESP Application  
Part 5, Emergency Plan**

**SECTION 7**

**EMERGENCY COMMUNICATIONS**

1.0 The Plan provides for establishing communications on a continuous (24 - hours per day) basis with the following organizations:

- 1) The State of New Jersey
- 2) The State of Delaware
- 3) Salem County New Jersey
- 4) Cumberland County New Jersey
- 5) New Castle County Delaware
- 6) Kent County Delaware
- 7) Lower Alloways Creek Township
- 8) PSEG (Internal Communication)
- 9) U.S. NRC

The actual notification methods are outlined in Section 6.0 of this Plan.

2.0 General Equipment and System Descriptions

To assure that external notifications and communications are available during an emergency, PSEG maintains both dedicated and commercial communications systems as part of its emergency response capabilities. Table 7-I summarizes the dedicated and commercial communications services maintained in emergency response facilities on and offsite. The following descriptions of the available communications systems emphasize the features which distinguish them. All are highly reliable telephone systems.

2.1 NETS

The Nuclear Emergency Telecommunications System (NETS) is a privately controlled, self-contained telephone exchange that operates as a closed system, not accessible from other phone exchanges. This feature allows the system to be dedicated to emergency response use. The system may use either PSEG microwave, commercial telephone system microwave, fiber optics, or buried cable transmission as needed. The exchange switching equipment is maintained at the Environmental & Energy Resource Center (EERC). As an independent system with an uninterruptible power supply, it may operate with or without local phone service or external power.

2.2 Centrex/ESSX 1

The Centrex/Electronic Switch System Exchange I (Centrex/ESSX 1) is also a privately controlled exchange, which PSEG operates with its own microwave signal system. This system is also independent of local phone service, since each circuit is independently wired. The microwave signal is generated from corporate facilities in Newark, NJ, separated from any local effects of weather or telephone use. The exchange is accessible from other exchanges, but circuits are located only in PSEG facilities. It is considered the primary backup for the NETS system.

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**2.3**     **DID**

Direct Inward Dial (DID) system is named for the dominant feature of the commercial telephone service provided by the local telephone company for the site. DID allows station telephones to be extensions or tied lines of the same systems. These exchanges can take advantage of backup power supplies provided to the stations, and may use either PSEG microwave, commercial telephone system microwave, or buried cable transmission systems to maintain external communications. This commercial telephone service is available as an additional backup for the NETS and Centrex/ESSX 1 system.

**3.0**     **Emergency Communications with the States of New Jersey and Delaware and Counties of Cumberland, Salem, Kent, and New Castle**

**NOTE**

The existing Salem and Hope Creek Generating Station Emergency Communication Systems will be used by the PSEG Site.

**3.1**     **Primary Emergency Communications**

The primary communications system between the PSEG Site, the states, and counties is the NETS system described above. NETS telephones are located in onsite emergency response facilities, and offsite emergency facilities of PSEG, as well as the Emergency Operations Center Facilities of the states and counties.

The system is used to notify the states for all emergency action levels and provide emergency communications with the counties. See Table 7-I for a summary of NETS equipment and locations.

**3.2**     **Secondary Communication**

The secondary communications to the New Jersey and Delaware states and counties are provided by both the Centrex/ESSX 1 and DID systems, described above, which are strategically placed throughout emergency facilities. Both systems can be used to contact the states and counties via commercial telephone lines.

**4.0**     **Additional Methods for State and County Contacts**

EMRAD (Emergency Radio) radio frequency communications equipment is located in the Control Room areas in each station and the EOF, and provide still another means of contacting the state of New Jersey, and the New Jersey counties of Salem and Cumberland.

National Attack Warning and Alert System (NAWAS) communications, which are available in the Control Room areas, TSC, and the EOF, provide still another means of contacting the state of Delaware.

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**5.0      Emergency Communications with the NRC**

A dedicated communications system with the NRC, the Federal Telecommunications System (FTS) consists of direct lines to the NRC. FTS lines are used to provide general accident information. These telephones are installed in the Control Room, TSC, and the EOF.

**6.0      PSEG Internal Communications**

**6.1      Telephone Systems**

Table 7-1 summarizes the equipment and locations for NETS access. Those locations include all PSEG emergency response facilities on and offsite.

As described above, NETS telephones are also used for PSEG internal communications for emergency response.

The NETS is used to initiate and expedite implementation of Emergency Plan Procedures. Any NETS locations may contact any other NETS location or access commercial back up services.

Centrex/ESSX 1 system also acts as a backup system for NETS in the PSEG internal communications network. DID, as described earlier, is the principal telephone system used for normal business at the site and is also a backup system for emergency response.

All PSEG emergency facilities on and offsite can be contacted from these systems.

**6.2      PSEG Site's Alarm Systems**

**6.3      Fire Detection System**

The fire detection system is designed to quickly detect visible or invisible smoke (or other products of combustion) and/or heat in designated areas of the plant. The fire alarm communication systems and subsystems are located at strategic points throughout the plant to warn personnel of a nuclear incident or other emergency conditions. Existing plant alarm systems are sufficiently audible to alert personnel in the event of a fire or need for assembly. These alarm communication systems consist of warning sirens and lights (in high noise areas) and the Plant Public Address (PA) system.

**6.4      Radiation Alert Alarm**

The PSEG Site radiation alert alarms are continuous, pulse-tone sounds, generated electronically in the tone generators of the PA systems. They are broadcast throughout each station via the PA page channels. The alarms are initiated manually by pushbutton from the control room.

**6.5      Local Area Evacuation Alarms**

Local evacuation alarms will be provided when available.

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**7.0 PSEG Site Public Address (PA) Systems**

The PA is a voice communication system which is designed for use in extreme environmental conditions such as dust, moisture, heat and noise. The system is located throughout the plant including the Control Room, OSC and TSC and consists of handsets, speakers and their associated amplifiers.

The power for this system is 120 volts AC from an inverted DC source to provide reliable communications during an emergency.

**8.0 PSEG Site Radio Systems**

One of the station's radio systems is the VHF security radio system. This radio system is used for security duties and is routinely tested in accordance with the Station Security Plan.

A second radio system is the Operations and Fire Protection Departments' UHF radio system. This multi-frequency system is used routinely by both station Operations Departments and the Fire Protection Department. When an emergency event is declared, these radio frequencies serve the station Operations Support Center (OSC).

A third, 900-MHz radio system is used for both onsite and offsite field monitoring team communications. Two specific frequencies (talk groups) are assigned for field monitoring team communications. One talk group is assigned for onsite communications between the Control Room, TSC, and onsite radiation monitoring team with a second talk group assigned for communications between the EOF and offsite radiation monitoring teams. In addition to the installed and portable 900-MHz radio hardware, backup communications devices are supplied to onsite and offsite field teams. The 900-MHz radio system is routinely tested in emergency preparedness drills and monitored by the IT department. This test frequency and monitoring has been determined to be more conservative than required by NUREG-0654 or 10CFR50, Appendix E.

**9.0 Notification of Owner Controlled Area**

Notification of the Owner Controlled Areas, also discussed in Section 11, Protective Response, is provided for the protection of all personnel located external to the stations' protected area. The primary notification method for the owner controlled area is an onsite siren system which directs evacuation. The backup means for notifying the owner controlled area is through the use of security force members making specific contacts or utilizing public address equipment.

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**TABLE 7-1  
NUCLEAR BUSINESS UNIT  
EMERGENCY RESPONSE FACILITIES COMMUNICATIONS SUPPORT <sup>1</sup>**

<b>*LOCATION</b>	<b>NETS LINE</b>	<b>DID LINE</b>	<b>Centrex/ESSX 1 LINE</b>	<b>FAX MACHINES</b>	<b>**SPECIAL EQUIPMENT</b>
EOF	TBD	TBD	TBD	TBD	TBD
ENC/JIC	TBD	TBD	TBD	TBD	TBD
CR	TBD	TBD	TBD	TBD	TBD
SMO	TBD	TBD	TBD	TBD	TBD
OSC	TBD	TBD	TBD	TBD	TBD
CP	TBD	TBD	TBD	TBD	TBD
TSC	TBD	TBD	TBD	TBD	TBD

Note <sup>1</sup> - Quantities of equipment to be determined after new plant data is available

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**CP** = Control Point

**ENC/JIC** = Emergency News Center/JIC

**OSC** = Operations Support Center

**TSC** = Technical Support Center

**CR** = Control Room

**EOF** = Emergency Operations Facility

**SMO** = SM Office Complex

**TBD** = To Be Determined

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**A** = UHF Ops/FP/OSC RADIO

**B** = VHF Security RADIO

**C** = OSC RADIO MONITOR

**D** = EMRAD RADIO

**E** = WALKIE-TALKIES

**F** = NAWAS

**G** = EMERGENCY EXT. 3333

**H** = SYSTEM OPERATOR (LOAD DISPATCHER)

**I** = PLANT PAGE

**J** = NRC/ENS (FTS 2000)

**K** = STATE CALLBACK

**L** = 900-MHz RADIO SYSTEM

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**TABLE 7-1 (Cont.)  
NUCLEAR BUSINESS UNIT  
EMERGENCY RESPONSE FACILITIES COMMUNICATIONS SUPPORT**

<b>LOCATION</b>	<b>NETS</b>	<b>SECONDARY NUMBERS</b>
NJ STATE POLICE (NJSP)	8	2
NJ – BNE	3	2
SALEM COUNTY	2	1 – NORMAL 1 – 24 HRS.
CUMBERLAND COUNTY	2	1 – NORMAL 1 – 24 HRS.
LOWER ALLOWAYS CREEK	1	1
DELAWARE (DEMA)	4	2
DEL STATE POLICE (DSP)	1	1
KENT COUNTY	1	1
NEW CASTLE COUNTY	1	1
WILMINGTON, DE (WDEL)	1	
MEMORIAL HOSPITAL OF SALEM COUNTY	1	
Telecopiers (fax machines) provided (1 each) to the NJSP, NJ-BNE, DSP and DEMA.		
<b>LOCATION</b>	<b>NETS</b>	
PSEG Security Department	2	
PSEG Fire Department	1	