

February 10, 2000

Mr. Jim Davis  
Director of Operations  
Nuclear Energy Institute  
1776 I Street, NW  
Washington, DC 20006

SUBJECT: NRC PLANS TO UPGRADE THE EMERGENCY TELECOMMUNICATIONS  
SYSTEM

Dear Mr. Davis:

On January 12, 2000, we discussed the possibility of nuclear power reactor licensees voluntarily upgrading their facility telecommunications systems to support the Nuclear Regulatory Commission's (NRC) proposed changes to the Emergency Telecommunications System (ETS). At that time you requested additional information to better inform licensees of NRC plans for the ETS. The enclosed information describes the ETS as it is currently maintained by the NRC and provides system criteria that power reactor licensees would need to satisfy if they choose to meet NRC guidelines for ETS performance.

We look forward to further interaction with you on this matter.

Sincerely,

***/RA by J. E. Lyons Acting for/***  
Ledyard B. Marsh, Chief  
Events Assessment, Generic Communications  
and Non-Power Reactors Branch  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

Contact: Joseph G. Giitter, IRO  
301-415-7485

Enclosure: Attachment: Emergency Telecommunications System (ETS)

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## **Emergency Telecommunications System (ETS)**

The NRC currently provides reliable long distance telephone to nuclear power plant sites and remote EOFs for the following seven essential telecommunication functions:

- Emergency Notification System (ENS) - used for communication between the NRC and licensee. Normal circuit for event reporting. Used to communicate reactor safety related information between the licensee and NRC during event response.
- Health Physics Network (HPN) - used for communication of radiological and meteorological information between the licensee and NRC during event response.
- Reactor Safety Counterpart Link (RSCL) - used for communication between NRC reactor safety team personnel at the site, regional office and headquarters. The NRC Resident Inspector will normally communicate on this circuit.
- Protective Measures Counterpart Link (PMCL) - used for communication between NRC protective measures team personnel at the site, regional office, and headquarters.
- Management Counterpart Link (MCL) - used for communication between the Site Team Leader (Director of Site Operations), Headquarters Executive Team and regional Base Team Manager.
- Operation Center LAN line (OCL) - This is an analog phone line which is made available for accessing the NRC Operations Center LAN using laptop computers with internal modems.
- Emergency Response Data System (ERDS) - One analog phone line per reactor unit for establishing the links between the licensee computer systems and the NRC ERDS.

This service is currently provided using Direct Access Lines (DALs) to the federal long distance service (FTS 2000) which is currently provided by AT&T (shown in Figure 1). During the accident at Three Mile Island, telephone network congestion at the central office serving the site prevented the establishment of communications between the NRC and the site during the early phases of the accident. The current ETS design using DALs to bypass the local central office ensures that emergency calls can be made even if the local central office is congested similar to the TMI experience. The NRC is aware that most nuclear power plants have corporate communications systems that do not depend on the local central office. In those cases, the staff proposes that licensees provide long distance access for all ETS functions.

The staff would consider licensee telecommunications systems acceptable for the current ETS if they, like the DALs, do not rely on the local central office. This is illustrated conceptually in Figure 2. The NRC believes that licensee telecommunications systems in many cases may be more reliable than the DALs, especially if they can reach the PSN using redundant and diverse means without going through the local central office. The importance of redundancy and diversity was illustrated by the experience at Davis Besse on June 24, 1998, when a tornado destroyed all modes of telecommunication at the site with the exception of the licensee's corporate microwave system. The Control Room operators had one circuit available on that network, which was used to communicate with the NRC, who subsequently notified the state

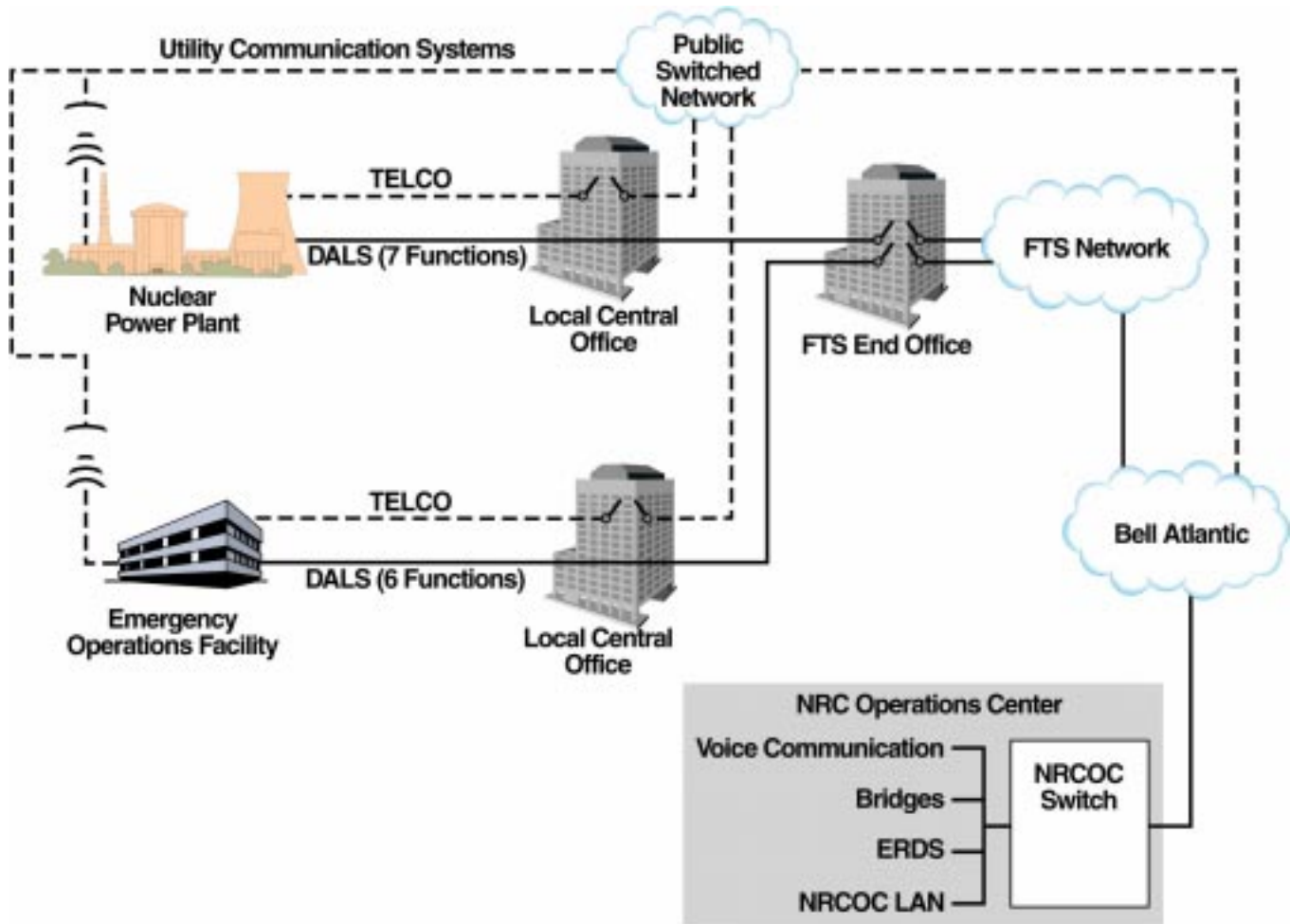


Figure 1. NRC Emergency Telecommunications Systems (ETS)

authorities of the conditions onsite. Examples of acceptable paths for ETS access to long distance networks include:

- Land lines through an on-site PBX out to the utility network
- For land lines that are switched at the local central office enhanced routing through the Government Emergency Telecommunications Service (GETS) would be necessary.
- A microwave link to the PSN (e.g., through a corporate office)
- A corporate fiber network
- A satellite system
- Any other telecommunication system or network which can provide long distance access independent of the local central telephone office.

For licensees to provide ETS access, the current ETS telephones or modems (ERDS) would have to be re-routed to be carried on a corporate system as described above. This could be accomplished by routing the circuits through the site PBX. This would provide access to multiple paths for call routing. Otherwise, the circuits could be re-routed at the main distribution frame to the system selected for ETS services. The NRC will establish toll-free numbers at the NRC Operations Center for all ETS related calls, therefore, the licensees will not bear the long distance call costs associated with ETS.

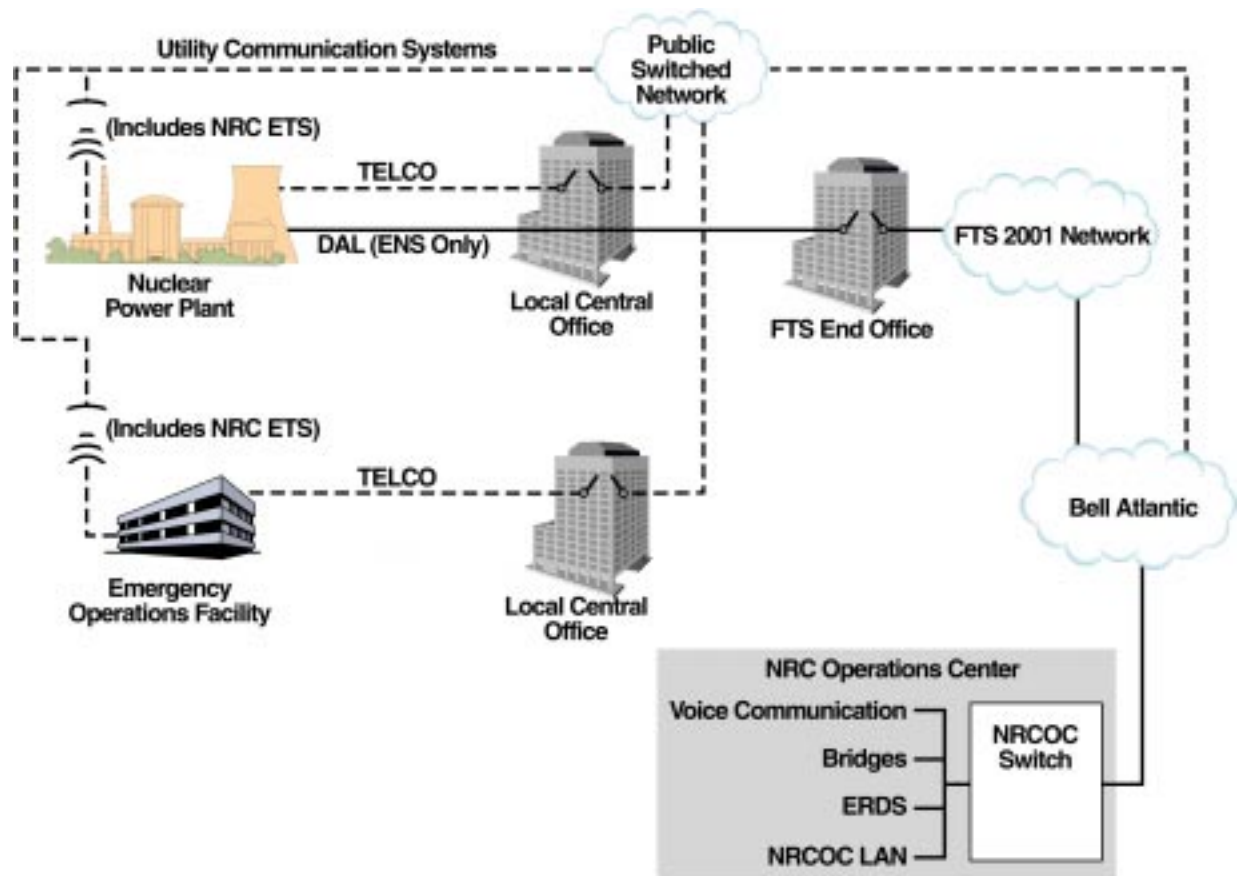


Figure 2. Proposed NRC Emergency Telecommunications System

The NRC will continue to provide the Control Room ENS at all sites via DALs to the FTS 2001 system (MCI will be the carrier).

For those sites that cannot meet the above criteria, the NRC will transition all ETS functions to FTS 2001.

The portable satellite telephones provided to each NRC Resident Inspector will remain on site and will be made available for emergency reporting in cases of total loss of telecommunication to the site.