



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

July 31, 2000

MEMORANDUM TO: Frank J. Congel, Director
Incident Response Operations

FROM: John R. Jolicoeur *J. Jolicoeur*
Operations Section
Incident Response Operations

SUBJECT: SUMMARY OF EMERGENCY TELECOMMUNICATIONS SYSTEM
WORKSHOP ON JULY 21, 2000

On July 21, 2000, IRO sponsored a workshop at the NRC Region III office to discuss the upcoming changes to the Emergency Telecommunications System (ETS) with interested industry representatives. The workshop was held as an open public meeting and was attended by NRC personnel from IRO, OCIO, and Region III as well as representatives from Amergen, ComEd, Dominion, First Energy, and Southern Nuclear. The attendance list is provided as attachment 1.

James Dyer, Region III Administrator, welcomed the attendees to Region III and provided his perspective on the importance of emergency telecommunications to the emergency response mission of the NRC. Frank Congel, Director, Incident Response Operations, then provided opening remarks. Dr. Congel briefly discussed the current ETS, the forces necessitating change in the system, and options for the future.

John Jolicoeur, IRO, presented the voluntary option available under RIS 2000-11. Under this optional approach, licensees who can provide access to long distance telephone service in a manner which bypasses local telephone switching may provide some or all of the ETS functions using existing corporate communications systems at their sites. The slides for this presentation are included in attachment 2.

Among the forces driving the ETS change is the scheduled termination of the FTS 2000 contract in December, 2000. Stanley Wood, OCIO, presented the process for transitioning the current FTS 2000 service to FTS 2001. This will be required for all licensees who do not wish to implement the voluntary initiative discussed above. Mr. Wood's presentations slides are included as attachment 3.

During the morning session, attendees were afforded the opportunity to ask questions to clarify their understanding of the issues involved. The most prevalent discussion topic surrounded the costs associated with the various options available to the utilities. We discussed the current system costs of approximately \$56 per month per line at the sites plus usage costs. These costs are carried by all licensees by way of the licensing fees. Additional costs associated with FTS 2000 and FTS 2001 include licensee costs associated with staff time required to coordinate with and escort the government's contractor for maintenance and repair activities. Among the points which were discussed was whether the voluntary option would reduce fees. The answer was no, however, the increased efficiency involved and cost avoidance associated

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with not using FTS 2001, which is more expensive than FTS 2000 for direct access lines, results in reduced upward pressure on licensing fees.

Another topic of discussion related to the need for ETS at Emergency Operating Facilities (EOF) that were a considerable distance from the site. It was postulated that an EOF that was sufficiently distant from a site would not be served by a telephone office which would be subject to blockage during an event at the associated site. It was agreed that local telephone service would be satisfactory if the EOF was not served by a telephone office that serves the 10 mile Emergency Planning Zone.

Some utilities asked if the requirement for long distance calls to bypass the central office applied to incoming calls as well as to outgoing calls. This is an issue at some plants where all incoming calls are routed through the local telephone company. Although in most cases, the design basis for ETS does not involve inward dialing, the Emergency Notification System (ENS) telephone in the control room does require inward dialing to allow the NRC Operations Center to establish contact with a site. It was agreed that if the licensee elects to implement the voluntary initiative and cannot route incoming calls around the local telephone company switch, the NRC will provide one FTS 2001 direct access line to serve as the control room ENS line.

Reportability of ETS circuit outages was also discussed. The current examples in NUREG 1022 do not translate well into the situation which would exist if licensees are providing the ETS functionality. The staff committed to review the current NUREG 1022 reportability guidance and provide guidance which would be applicable to the voluntary ETS initiative.

The afternoon session was used to clarify NRC expectations concerning the written notification from licensees which is discussed in RIS 2000-11. A general statement of what would constitute a sufficient notification was developed. This statement is included as attachment 4.

The meeting was well received and productive. The industry and NRC participants participated in an open and informative discussion of the issues. Industry representatives showed interest in the voluntary initiative, however, no formal commitments were made during the meeting. Based on our discussions, licensee notifications of intent to implement the voluntary ETS initiative could be expected between July 31 and August 15, 2000, pending licensee management approval. If you have any further questions concerning this meeting please contact me at 301-415-6383.

Attachments:

1. ETS Workshop Attendees
2. ETS Voluntary Program Slides
3. FTS 2000 to FTS 2001 Transition Slides
4. RIS 2000-11 Response Guidelines

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OFC	IRO	A	IRO	A					
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DATE	07/31/00		07/31/00						

ETS Workshop Attendees

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EMERGENCY
TELECOMMUNICATIONS
SYSTEM WORKSHOP

VOLUNTARY PROGRAM

July 21, 2000

- The Emergency Telecommunications System (ETS) provides reliable telecommunications between licensee facilities and NRC responders during emergencies at licensed facilities.
- During the TMI accident, telephone traffic at the local telephone company office became saturated, hindering NRC's ability to communicate with the site.

- Following TMI, provisions for communication with NRC during emergencies was incorporated in the regulations at 10 CFR Part 50, App. E.
- For nearly twenty years, NRC has provided this capability by virtue of the ETS.
- Early ETS consisted of the Emergency Notification System (ENS) and the Health Physics Network (HPN).

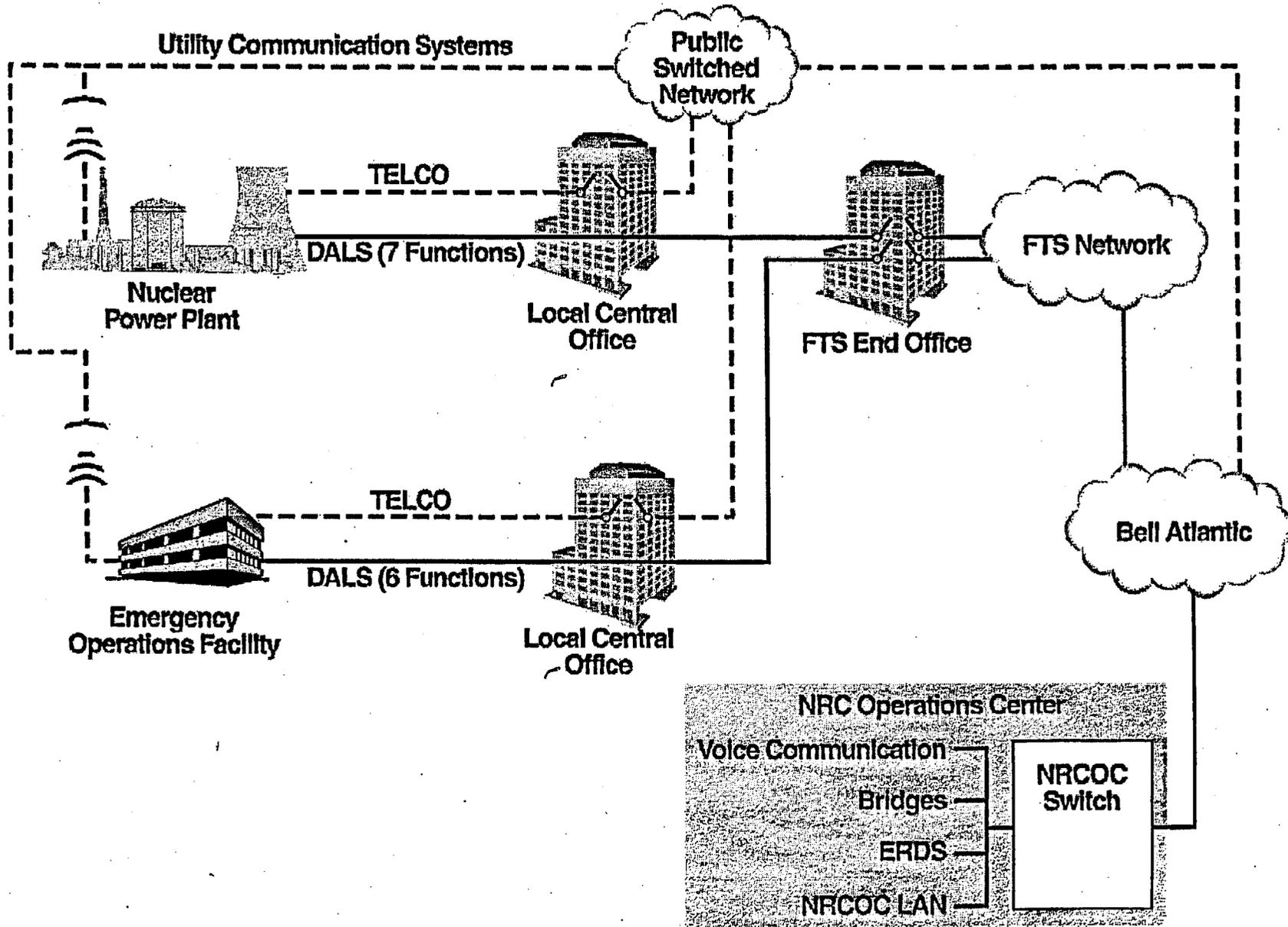
- ENS consisted of dedicated ringdown circuits from the NRC Operations Center to the Control Room, TSC, EOF and Resident Inspector office at all nuclear power plants and selected fuel cycle facilities.
- HPN originally consisted of star networks with nodes for the NRC Operations Center and the Regional IRC on each network.
- HPN star networks were abandoned in the late 1980s due to poor performance.

- HPN placed on regular telephones using the Public Switched Telephone Network (PSTN)
- ENS costs increased throughout the 1980s. By the end of the decade, the annual operating and maintenance cost of ENS was approximately \$3.8M.
- ENS hardware became obsolete.

- From 1988 to 1990, NRC conducted a study of possible upgrades to the NRC ETS.
- In SECY 91-149, the staff proposed to upgrade the ETS using the new FTS 2000 network.
- NRC was on the A side of the FTS 2000 system which was the AT&T component of FTS 2000.
- Circuits installed at plant and EOF

Current ETS

Emergency Telecommunications System



- This new ETS provided the following seven essential communication functions.
 - Emergency Notification System (ENS)
 - Health Physics Network (HPN)
 - Emergency Response Data Sys. (ERDS)
 - Reactor Safety Counterpart Link (RSCL)
 - Protective Measures CL (PMCL)
 - Management Counterpart Link (MCL)
 - Operations Center LAN Access (OCL)

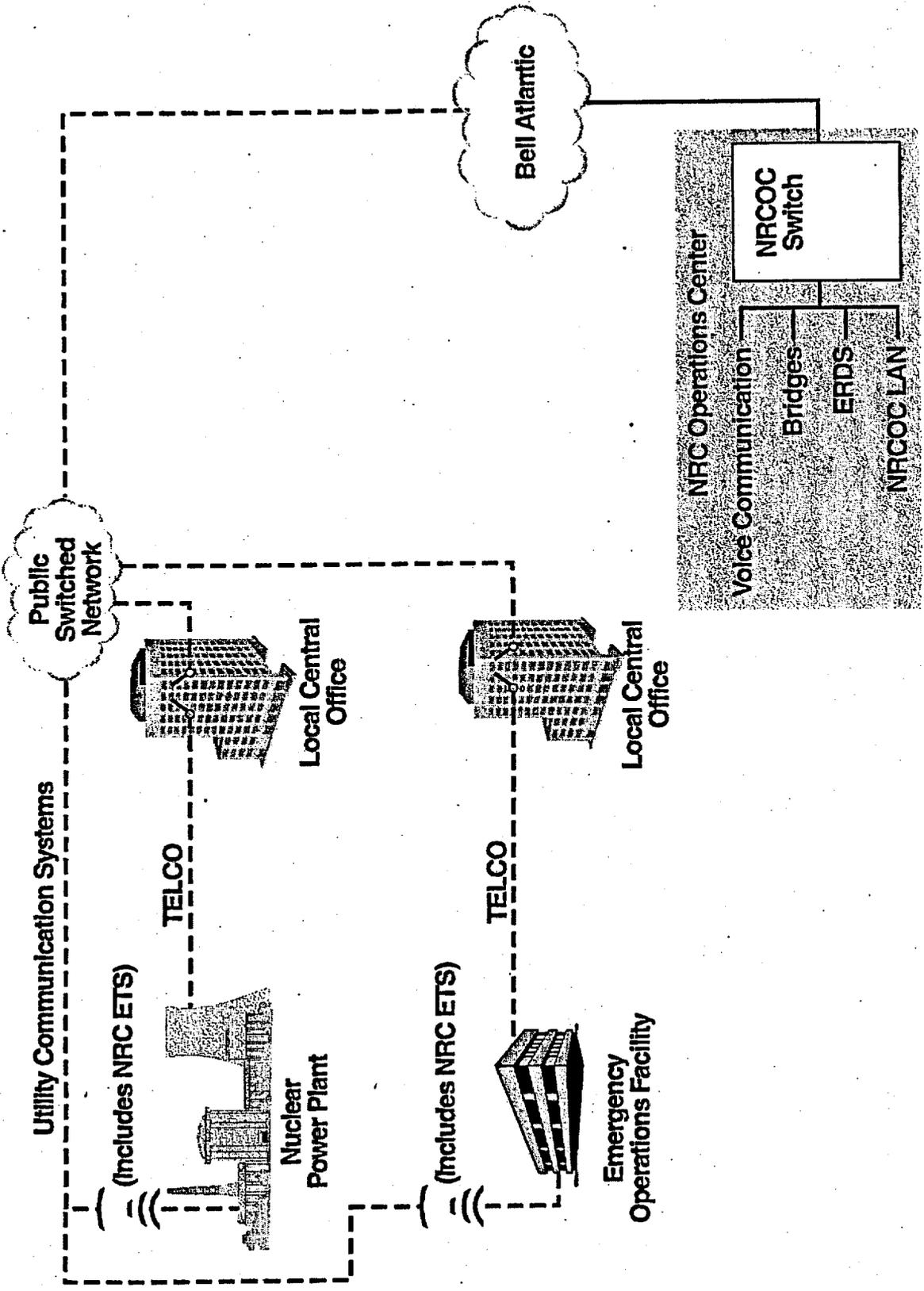
- For many years FTS 2000 met NRC's emergency communication needs in a relatively reliable and cost effective manner. However, within the last couple of years, a number of issues have arisen:
 - End of FTS 2000 contract (Dec.2000)
 - Substantial Cost increases
 - Deregulation of utilities and telecommunications providers

- Based on a consultant study, a National Communication System report, and a survey of utilities, IRO concluded that most nuclear power plant sites could communicate with NRC without relying on the local telephone office.
- In SECY 98-194 the staff recommended rulemaking that would require NPP sites to provide access to long distance telephone network through their corporate communication systems.

- In December of 1998 the Commission approved the staff's recommendation to pursue rulemaking.
- The staff initiated a rulemaking process.
- Early in the rulemaking process, the staff determined that Appendix E already provided sufficient basis for pursuing this effort via a Generic Letter.

- Staff discussed the possibility of a Regulatory Issues Summary (RIS) with NEI
- NEI canvassed industry with the following results:
 - About half of utilities responded
 - 2 utilities could not bypass LCO
 - 1 utility could not commit due to corporate restructuring
 - 2 utilities indicated that they did not want to participate
- RIS 2000-11 issued June 30, 2000

Voluntary Initiative Emergency Telecommunications System



- If a site does not implement the voluntary option, transition to FTS 2001 will be necessary.
- Possible issues:
 - WorldCom transition strategy requires licensee effort for cutover and testing
 - FTS 2001 uses commercial long distance
 - Cutover required by Dec. 2000

- Provide written commitment to participate in the Optional ETS methodology. Include:
 - Description of system to be used.
 - Updated phone numbers for the ETS circuits
 - Estimated schedule
 - Point of contact name, phone number, e-mail address.
 - Early replies necessary to implement prior to scheduled FTS 2001 conversion.

- **System Requirements:**
 - All ETS circuits supported.
 - Analog lines for ERDS and OCL
 - Must be capable of accessing commercial long distance network independent of the local central telephone office
- If only the site or the EOF can support these requirements, a hybrid FTS 2001 and licensee network solution is acceptable.

- **Government Emergency Telecommunication Service (GETS)** provides priority access to long distance service
- **Telecommunication Service Priority (TSP)** provides priority restoration service.
- **NRC is a participating member of NCS.**
We will continue to work with NCS to ensure that the NS/EP telecommunications solutions developed by NCS are updated to keep pace with changes in telecom industry.

NRC Point of Contact Emergency Telecommunications System

- **Primary:**

John Jolicoeur, NRC/IRO

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- **Alternate:**

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USNRC Transition of the Emergency Telecommunications System: FTS 2000 to FTS 2001 and RIS 2000-11

Presentation for Emergency Telecommunications System

Workshop

NRC, Region III Office

Lisle, IL

July 21, 2000

Background of Transition

- Current service provider is AT&T under the FTS 2000 telecommunications services contract
- Contract expires December 6, 2000
- Follow-on contracts were awarded to Sprint and MCI WorldCom in December 1998
- NRC selected MCI WorldCom as its primary telecommunications services provider

Options for Service

- Total transition of all Emergency Telecommunications System services
- Remain with current service provider
- Implementation of voluntary participation initiative as proposed in the Regulatory Issue Summary 2000-11

NRC Selected Options

- Preferred: Licensee implementation of voluntary initiative as described in the RIS 2000-11 Attachment 2
- Secondary: Transition from FTS 2000 to FTS 2001 network services
- Not an Option: Remaining with AT&T is not option due to cost and diminished support from current vendor

Transition to Preferred Option

- Coordination with licensees for testing and implementation of the voluntary participation initiative
- NRC has ordered four toll-free numbers from MCI WorldCom to absorb usage charges as part of this initiative

Transition to FTS 2001

- Transition orders were submitted to MCI WorldCom early July
- Government's cost of the ETS using NRC provided telecommunications services will increase
- Licensee participation in this effort will be necessary
- Level of effort will depend upon the type of transition

ETS Transition

- ETS “700” numbers will remain the same - only the network provider and associated circuitry will change
- All ETS numbers are programmed into the MCI WorldCom routing tables
- Dialing will consist of eleven digit dialing (dial 1 + 10 digits similar to current commercial long distance)

Current ETS Network Call Path

- NRC is transitioning telephone services to MCI WorldCom inclusive of the Operations Center
- MCI WorldCom has programmed ETS “700” numbers to point to a shared network gateway with AT&T
- Calls made on MCI WorldCom to the ETS are completed on the AT&T network today

ETS Call Path During Transition

- As ETS lines are transitioned to MCI WorldCom:
 - Each ETS number will be pointed to an MCI WorldCom PBX trunk port vice the shared gateway
 - Calls originated from AT&T FTS 2000 DALs will not complete to the new MCI “700” number location
 - Calls originated on MCI will complete on both AT&T and MCI networks depending upon which network is providing the service at the time of the call

Types of Transitions

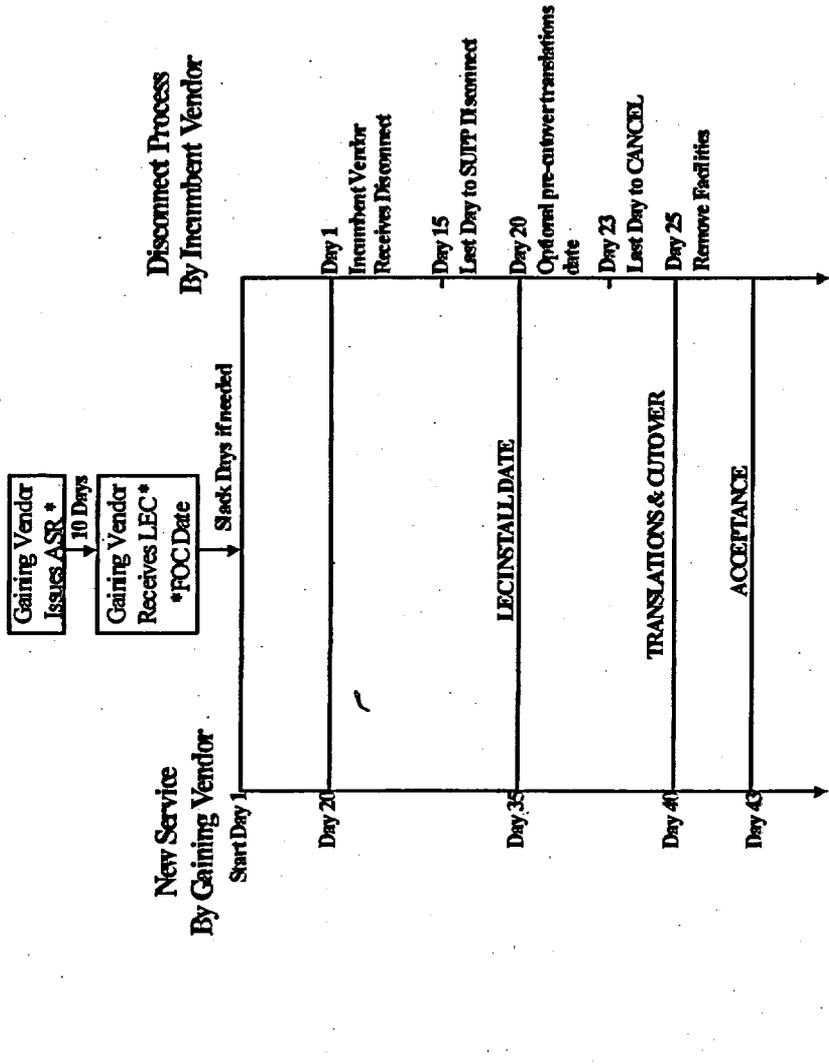
- Parallel: All new facilities including customer provided equipment; e.g. telephone set
- Managed: New facilities are limited to a specified point of presence for the service - contingency plans are required *
- Coordinated: Last resort - high risk of failure with low probability of contingency support

Methodology of Transition

- The NRC will use a combination of parallel and managed transition where available
- Coordinated or “hot cuts” will be avoided at all costs
- Where LEC facilities allow for parallel access to the licensee’s MDF a new circuit will be installed for the ETS functions with re-use of the licensee’s inside wire facilities.

Managed Cutovers

MANAGED CUTOVER NEW SERVICE & DISCONNECT TIMELINE



* ASR: Access Service Request * LEC: Local Exchange Company * FOC: Firm Order Confirmation

Installation/Disconnect Process

- After customer submission of order, MCIW will issue an Access Service Request (ASR) to the Local Exchange Company (LEC). In Process
- Upon the receipt of the LEC's Firm Order Confirmation (FOC) – which contains the LEC's best available due date for service installation – MCIW and the NRC will determine the best cutover due date in coordination with the licensee. Pending

Installation/Disconnect Process

- MCIW must validate the submitted 700 numbers to ensure no number duplication. Completed
- NRC to issue an AT&T disconnect order immediately with the due date based upon the FOC date from LEC. Pending
- The customer prepares to direct their originating traffic to the FTS2001 network (1+10 digit dialing). Pending

Installation/Disconnect Process

- On the FOC date the LEC installs the access service.
- Upon cutover, MCIW routes the customer to their FTS2001 service, while AT&T vendor removes its routing translations.
- If the cutover is NOT successful, then the NRC will issue a Disconnect SUPP [supplemental order] to AT&T to reschedule the cutover's disconnect portion.

Installation/Disconnect Process

- If the cutover is successful, AT&T coordinates with the Local Government Contact (LGC) to remove any equipment and verify all services to be disconnected.
- AT&T can now disconnect the customer's old service from both the LEC and its own facilities.

IMPORTANT FACTORS

- It is imperative during transition cutovers that real time coordination occurs between the GSA, the FTS2000 and FTS2001 vendors, local access and switch contractors as required, and the user in order to minimize:
 - False or erroneous user and service provider trouble tickets

IMPORTANT FACTORS

- Unscheduled network alarms and disruption
- Confusion during 'Coordinated' disconnects where re-use of access circuits is required
- Schedule change impacts
- User outages
- Site and overall transition duration
- Call routing problems

Transition Coordination

There is no charge for issuing disconnect orders. However, there are significant costs associated with supplementing and/or canceling disconnect orders. Therefore, prudent planning is strongly advised to avoid costly penalties.

TRANSITION POINTS OF CONTACT

- Stan Wood, OCIO
Telno: (301)415-7211
Pager: 1-888-614-1093
Email: sdw@nrc.gov
CellPhone: (301)275-9552
- John Jolicoeur, IRO
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Email: jrj1@nrc.gov

Friday, July 21, 2000

**ETS Workshop Guidelines for the Licensee's
Statement of Intent to Implement the Proposed
Voluntary Initiative in lieu of ETS**

1. RIS 2000-11 requests that licensees provide a written commitment to participate in the Optional ETS methodology to include:
 - Description of system to be used.
 - Updated phone numbers for ETS circuits
 - Estimated schedule
 - Point of contact name, phone number, e-mail address.
2. Early replies are necessary to implement prior to scheduled FTS 2001 conversion.
3. The system description on the following page would be an acceptable description of the functionality to be provided by licensee telecommunication systems.
4. Updated phone numbers should be provided under separate cover directly to the NRC ETS Project Manager for operations security reasons.

System Description:

Use licensee communications network(s) to provide a communications link(s) to the NRC Operations Center on a regular basis and when normal telephone service (business dial tone) is unavailable.

The following ETS functions will be supported (please check the appropriate functions):

Plant

Separate EOF

ENS*		ENS*	
HPN		HPN	
RSCL		RSCL	
PMCL		PMCL	
MCL		MCL	
OCL**		OCL**	
ERDS**			

Note: (*) Direct inward dialing (DID) required
(**) Analog only