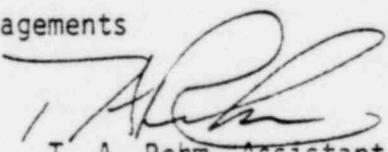


November 15, 1979

For: The Commissioners
From: T. A. Rehm, Assistant for Operations, Office of the EDO
Subject: WEEKLY INFORMATION REPORT - WEEK ENDING NOVEMBER 9, 1979

A summary of key events is included as a convenience to those Commissioners who may prefer a condensed version of this report.

<u>Contents</u>	<u>Enclosure</u>
Administration	A
Nuclear Reactor Regulation	B
Standards Development	C
Nuclear Material Safety and Safeguards	D
Inspection and Enforcement	E
Nuclear Regulatory Research	F*
Executive Legal Director	G
International Programs	H
State Programs	I
Management and Program Analysis	J
Controller	K
Analysis and Evaluation of Operational Data	L*
Items Approved by the Commission	M**
Calendar of Significant Events	N
Calendar of Speaking Engagements	O


T. A. Rehm, Assistant for Operations
Office of the Executive Director
for Operations

Contact:
T. A. Rehm
49-27781

1435 039

*No input this week.
**Deleted from Commissioners and PDR copy.

7911290

179

SUMMARY OF KEY EVENTS
WEEK ENDING NOVEMBER 9, 1979

Duane Arnold

During routine testing of the turbine stop valves, low electro-hydraulic control (EHC) system oil pressure occurred leading to a turbine trip and subsequent reactor scram. Investigation by plant personnel identified no problems with the EHC system and it was concluded that a spurious decrease in oil pressure tripped the EHC oil pressure switch and resulted in the shutdown.

Turkey Point, Units 3 and 4

On November 2, 1979, Florida Power and Light Company (FPL) notified NRR and IE Region II that an error had been found in the Turkey Point ECCS analyses. It is a calculational error that applies only to the Turkey Point Units and has been corrected resulting in a lowering of the F_0 from 2.1 to 1.9. An amendment request for the new F_0 limits with a written description of the recalculated F_0 will be filed by the licensee as soon as possible the week of November 5, 1979. Meetings to discuss the generic implications of this error are scheduled with Westinghouse.

Big Rock Point

On November 1, 1979, Consumers Power Company (CPC) informed the NRC that a single failure occurred that would have prevented containment isolation by either automatic signal or manual operation of the control switch. A defective power supply was the source of the failure. The susceptibility of the containment isolation system to certain single failures, including the affected power supply was identified in an NRC letter to CPC dated October 16, 1979. We will review the CPC response to the letter to assure that appropriate corrective actions are taken.

Meeting with OTA on Safeguards for Radioactive Waste

On October 31, 1979, members of the Division of Safeguards participated in a meeting with members of the Office of Technology Assessment (OTA). OTA is initiating a study on the disposal of radioactive waste and was particularly interested in discussing safeguards requirements for radioactive waste, especially commercially generated spent power reactor fuel.

Fuel Receiving and Storage Station, Barnwell, South Carolina

The proceeding on the application by Allied-General Nuclear Services (AGNS) for operation of the Fuel Receiving and Storage Station (FRSS) at Barnwell, South Carolina has been dormant since May 1977; and the staff is not aware of any specific plans to resume activities by any of the parties. Nevertheless, the staff recently became aware of information relevant and material to any future FRSS proceedings. An apparent fault has been observed and photographed in a trench at the Chem-Nuclear Services low-level burial ground site which is adjacent to the AGNS site. During an on-site inspection of the area another apparent fault was observed in an open burial trench.

1435 040

Emergency Preparedness

A funding law for radiological emergency response plans was enacted in New Jersey which would permit up to \$250,000 annually of the franchise and gross receipts taxes imposed on the nuclear power station by the State to be granted to the affected counties and municipalities for the purpose of preparing, testing and implementing nuclear emergency response plans.

1435 041

OFFICE OF ADMINISTRATION

Week Ending November 9, 1979

ADMINISTRATION OF THE FREEDOM OF INFORMATION ACT

STATUS OF REQUESTS

	<u>Initial Request</u>	<u>Appeal of Initial Decision</u>
Received	513	32
Granted	356	11
Denied	82	15
Pending	75	6

ACTIONS THIS WEEK

Received

Julie A. Matthews,
Bentley College
(79-473)

Requests information pertaining to the reorganization of the NRC, important rules and regulations, public information pamphlets and information pertaining to recent case decisions.

Roger A. Keller,
Mallinckrodt, Inc.
(79-474)

Requests a copy of NUREG-0302, "Remarks Presented at Public Regional Meetings to Discuss Regulations (10 CFR Part 21) for Reporting of Defects and Noncompliance."

Roberto Armijo
(79-475)

Requests comments on NUREG-0567, "Proposed Policy and Procedures for Differing Professional Opinions", why the NRC decided to initiate this program, and records generated or received about NRC's handling of past situations where employees had differing opinions.

Richard A. Kester
(79-476)

Requests a copy of the FOIA Annual Report for 1977 and 1978 and NRC's response to the second portion of Attorney General Bell's memorandum of December 11, 1978 on the administration of the FOIA.

S. Saluja,
Viking Energy Corporation
(79-477)

Requests a copy of the winning proposal for RFP No. NRR-80-105, "Utility Management and Technical Resources."

CONTACT: J. M. Felton
492-7211

1435 042

ENCLOSURE A

Received, Cont'd

D'On Voelzke,
Committee to Bridge the Gap
(79-478)

Requests a copy of the UCLA Nuclear Energy Laboratory Facility License R-71, a copy of the Safety Analysis Report and the application for license amendment submitted by UCLA on May 22, 1975.

Joanne Schwart,
Prairie Alliance
(79-479)

Requests seven categories of information regarding Clinton Units 1 and 2 and information on the "Reed Report" by the General Electric Company.

Ellyn R. Weiss,
Sheldon, Harmon,
Roisman & Weiss,
on behalf of UCS
(79-480)

Requests documents by the NRC Task Force on Siting Policy of the application of proposed siting criteria to existing nuclear plant sites.

A. Kranish,
Trends Publishing, Inc.
(79-481)

Requests access to all material received, considered or approved by the Commission during its consideration of the inventory at NFS-Erwin.

Myron E. Hatcher,
Health Systems & Resource
Planning Associates
(79-482)

Requests a copy of the successful proposal for RFP No. RS-OSD-79-003, "Behavioral Observation Program to Assure Continued Reliability of Employees."

Lindsay Audin
(79-A-25-79-333)

APPEAL TO THE EDO for documents relating to the routing of spent fuel shipments.

(An NRC employee)
(79-A-26-79-419)

APPEAL TO THE EDO for a lack of response for information regarding the ratings and information relied upon to make those ratings for Vacancy Announcement 79-15.

Granted

Stephen Laudig,
Attorney-At-Law
(79-239)

In response to a request for information submitted to the NRC related to the construction or operation of the nuclear generating station at Marble Hill near Madison, Indiana, made available 49 documents and informed the requester other records relating to his request are available at the LPDR in the Madison-Jefferson County Public Library in Madison, Indiana.

Laura Wiencus
(79-436)

In response to a request for six categories of information relating to the structure of the NRC, made available five documents.

Steve Gannis
(79-440)

In response to a request for information concerning the organization of the NRC, the number of operating and planned nuclear power plants and radioactive waste disposal, made available seven documents.

1435 013

Granted, Cont'd

<p>Pamela E. Bryant, Wilson Hill Associates, Inc. (79-443)</p>	<p>In response to a request for a listing of NRC contract awards for fiscal year 1979, made available this listing.</p>
<p>James S. Drewry, Attorney-At-Law (79-445)</p>	<p>In response to a request for information pertaining to the Surry Power Station, made available nine documents.</p>
<p>Donald C. Martin, McGraw Hill Publications, Inc. (79-452)</p>	<p>In response to a request for a copy of all tapes, transcripts and minutes of closed Commission meetings since March 28, 1979 dealing with the functioning and structure of the EDO, made available two documents. Informed the requester that in order to fulfill his request, all tapes would have to be audited to determine if there were portions which dealt with the topic of his request and would require between 20-30 hours of research time.</p>
<p>Stephen Laudig, Attorney-At-Law (79-454)</p>	<p>In response to a request for a copy of Public Service of Indiana's application for an operating license for the Marble Hill Station, informed the requester these records are available at the PDR and in the LPDR in the Madison-Jefferson County Library in Madison, Indiana.</p>
<p>Ginger Rutland, Chronicle Broadcasting Company (79-467)</p>	<p>In response to a request for documents compiled by the Mechanical Engineering Branch for IE Bulletins 78-12, 78-12A, 78-12B, a copy of the report prepared by Babcock & Wilcox on the possible presence and effects of atypical weld materials and all documents pertaining to possible atypical weld materials in the reactor pressure vessel at Rancho Seco Unit 1 since May, 1979, made available eight documents.</p>
<p>Beverly Real (79-472)</p>	<p>Made available a copy of the proposed regulation implementing Section 504 of the Rehabilitation Act of 1973.</p>
<p>(An NRC employee) (79-A-26-79-419)</p>	<p>In regard to an appeal for lack of response for information regarding the ratings and information relied upon to make those ratings for Vacancy Announcement 79-15, made available seventeen documents. Denied two documents in their entirety and portions of two documents.</p>

1435 044

Denied

(An NRC employee)
(79-458)

In response to a request for information regarding Vacancy Announcement 79-296, denied portions of one document and denied all information on applicants' work experience, education, age, notes and information on interviews, the disclosure of which would constitute a clearly unwarranted invasion of the privacy of the individuals concerned.

1435 045

DIVISION OF CONTRACTS

(Week Ending November 9, 1979)

PENDING COMPETITIVE REQUIREMENTS

RFP RS-NRR-80-106

Title - Review of Non-Radiological Environmental Operating Data

Description - The contractor shall perform technical reviews of extensive environmental monitoring data at three yet-to-be-identified operating plants to assist in making licensing amendments. The specific objective of each aspect of the monitoring program, as well as the details of sampling schedules and methodology, are described in the Environmental Technical Specifications for each plant.

Period of Performance - One year

Sponsor - Office of Nuclear Reactor Regulation

Status - Solicitation being developed.

PROPOSALS UNDER EVALUATION

RFP RS-NRR-80-101

Title - Advanced Reactor Accident Delineation and Assessment

Description - This project will provide technical assistance to the NRC in the areas of safety and licensing associated with advanced reactor concepts.

Period of Performance - Three years

Sponsor - Office of Nuclear Reactor Regulation

Status - Best and final proposals due by November 9, 1979.

CONTRACT AWARDS

1. NRC-10-80-362

Title - NRC Publication Distribution Services

Description - Maintaining NRC standard mailing lists and publications inventory. Fulfillment of NRC distribution requirements and free requests for copies of NRC publications and related activities.

Period of Performance - Two years

Sponsor - Office of Administration

Status - Fixed-price contract awarded to Computer Data Systems, Inc., on November 8, 1979 in the amount of \$707,803.

1435 046

ENCLOSURE A

2. NRC-10-80-397

Title - MPA Management Information Systems Support Services

Description - Development, maintenance and/or operation of automated management information systems in support of OMPA objectives.

Period of Performance - One year with two option years

Sponsor - Office of Management and Program Analysis

Status - Labor Hour contract awarded to Input-Output Computer Services, Inc., on November 2, 1979 in the amount of \$750,541.

ADMINISTRATIVE MATTERS

In the Weekly Progress Report of October 12, 1979, protests to the Contracting Officer on the award of contracts NRC-01-79-002 and NRC-01-79-003 were reported. The protestor, A. T. Kearney, Inc., also subsequently protested to the General Accounting Office (GAO).

A debriefing was conducted by DC (K. Morton and R. Gustave), ELD (R. Avery) and the Source Evaluation Panel members (J. Montgomery/SD, W. Immerman/RES and J. James/I&E) for the protestor in the NRC offices in Silver Spring on October 24, 1979. As a result of that debriefing, the protestor has withdrawn its protests to the GAO and we expect that a withdrawal of the protests to the Contracting Officer is imminent.

1435 047

ENCLOSURE A

DIVISION OF SECURITY
Week Ending November 9, 1979

1. The Commission has approved the upgrade of security clearances of Office of Inspection and Enforcement (OIE) inspectors to the "Q" level (SECY-79-518). In coordination with OIE, the Division of Security has initiated actions to accomplish OIE upgrade in a timely manner beginning with the resident inspectors.
2. The Division of Security has received for review and comments the functional and data requirements report on its personnel security tracking system. This report marks the completion of the first phase of the upgrade and enhancement of the Central Personnel Security Index (CPSCI), which is being conducted in coordination with the Division of Automatic Data Processing Support and its principal contractor, International Business Services, Inc., (IBS).
3. R. J. Brady, Director of Security, met with Eric Hultman, Senate Judiciary Committee staff member, on November 11, 1979, and discussed a proposed bill, S.1612, entitled, "Federal Bureau of Investigation Charter Act of 1979." This bill would, among other things, revise Section 145 (d), (e) and (f) of the Atomic Energy Act and would preclude the FBI from conducting background investigations for certain NRC positions of a high degree of importance or sensitivity. Mr. Hultman was given pertinent background information regarding NRC's use of the Bureau to conduct background investigations.

1435 348

OFFICE OF NUCLEAR REACTOR REGULATION

WEEKLY ITEMS OF INTEREST
(Week Ending November 9, 1979)

LACBWR

We met with DPC and their consultants to discuss the liquefaction issue at the LACBWR site. DPC and their consultants Dames and Moore made a presentation in support of their conclusion that no liquefaction would occur for a 0.12g SSE. Because of the bias in the density of samples, the staff and its consultant, the Corp. of Engineers remained unconvinced that liquefaction could not be a problem at the site. After a staff caucus we informed DPC that they would have to take positive steps to fix the site (by dewatering or other methods). They agreed to submit a proposed fix by November 30, 1979.

Zion 1 & 2

The metallurgical examination on one feedwater line/nozzle sample from Unit 1 indicated the need to repair the feedwater lines in this area on the other three Unit 1 steam generators. The repairs are presently underway. Radiographing of the Unit 2 feedwater lines is continuing.

Duane Arnold

The plant was shut down by a reactor scram at approximately 7:00 a.m., on November 1, 1979. During routine testing of the turbine stop valves, a low electro-hydraulic control (EHC) system oil pressure occurred which lead to a turbine trip and subsequent reactor scram. An investigation by plant personnel identified no problems with the EHC system. It was concluded that a spurious decrease in oil pressure tripped the EHC oil pressure switch and resulted in the shutdown. The plant returned to power operation the morning of November 2, 1979.

Turkey Point, Unit Nos. 3 and 4

On November 2, 1979, Florida Power and Light Company (FPL) notified NRR and IE Region II that an error had been found in the Turkey Point ECCS analyses. It is a calculational error that applies only to the Turkey Point Units. The error has been corrected and has resulted in a lowering of the F_0 from 2.1 to 1.9. By administrative controls, FPL had adjusted the F_0 appropriately. This also requires an augmented surveillance to be put into affect. A written report will be filed according to the Technical Specifications. The current F_0 measured and appropriately corrected, is 1.71 for Unit 3 and 1.86 for Unit 4. Augmented surveillance is required for Unit 3 above 92% power and for Unit 4 above 95% power.

1435 349

Turkey Point currently has about 17.5% of the steam generator tubes plugged in Unit 3 and about 20.5% of the steam generator tubes plugged in Unit 4. The FQ of 1.9 is based on 22% of the steam generator tubes being plugged.

An amendment request for the new FQ limits with a written description of the recalculated FQ will be filed by the licensee as soon as possible the week of November 5, 1979. Meetings are for November 13, 1979 to discuss the generic implications of this error scheduled with Westinghouse.

Big Rock Point

On November 1, 1979, Consumers Power Company (CPC) informed the NRC that a single failure occurred that would have prevented containment isolation by either automatic signal or manual operation of the control switch. The reactor was in cold shutdown at the time of the failure. A defective power supply which was the source of the failure was replaced to restore operability of the affected containment isolation valves. The susceptibility of the containment isolation system to certain single failures, including the affected power supply was identified in an NRC letter to CPC dated October 16, 1979. That letter requested that CPC either provided technical justification or proposed design modifications for the apparent weaknesses in the containment isolation system (45 days from date of NRC letter). We will review the CPC response to the letter to assure that appropriate corrective actions are taken.

Millstone 2

Northeast Nuclear Energy Company (NNEC) provided the results of their second feedwater line inspection to the staff in a meeting in Bethesda, Md. on November 5, 1979. We had authorized operation of Millstone 2 for approximately two months, while repair methods were developed and reviewed by the staff, by a letter Safety Evaluation dated August 25, 1979. NNECO stated that the inspection revealed no significant crack growth and requested they be allowed to operate Millstone 2 until the summer 1980 refueling outage with one intervening inspection. One crack area is not accessible to ultrasonic inspection (needed for determination of crack depth). This factor influenced the staff decision. At the conclusion of the meeting, we informed the licensee that although we generally support their technical conclusions we find it prudent to repair the feedwater lines at this time. The licensee, on November 6, 1979, agreed to initiate the repair program. NNECO estimates that the repair will take four weeks and replacement power will cost \$15,000,000.

Farley, Unit 1

On November 7, 1979, a fire was observed in one of the redwood cooling towers. The plant was operating at 48% power at the time. Although offsite assistance was requested, onsite fire protection personnel had put out the fire in approximately 30 minutes. Damage is relatively minor and the plant continues operation. No press release is planned although press media in Dothan, Alabama are aware of the fire. A Preliminary Notification will be issued by I&E.

1435 050

Brunswick Unit No. 1

Brunswick Unit No. 1 tripped on low reactor water level on November 9, 1979 from 98% power. Group 1 isolation and ECCS operated as designed. The low water level was apparently caused by an inadvertent feedwater pump runback which occurred when changing from 3 element to 1 element control for maintenance. The plant will be in cold shutdown for two days while repairing B recirculation pump seal. CP&L issued a press release. A meeting was held on November 6, 1979 with Region II in Atlanta to discuss the incident.

Quad Cities

The Des Moines Register called Region III about 5:00 p.m., November 8, 1979 say that they had just had an anonymous call stating that there were about 50 open drums of radwaste in the back yard of a residential address near the Quad Cities Station. The Resident Inspector was dispatched immediately, accompanied by the Station Assistant Superintendent, with a Cutie Pie counter, to investigate. At the address given, they found three old drums, one having enough markings remaining to identify it as having been intended for use in storing radwaste. The person living in the house, a Station Contractor, stated that he has salvaged the drums from a cold dump about two years ago after they had been rejected by the Station for waste storage. He had been using them to burn trash. The drums were checked for radioactivity and were found to have none.

According to the Station Resident Inspector, there has been considerable news media interest, so much that a Preliminary Notification might be issued.

Calvert Cliffs Unit No. 1

The staff has become aware of a significant neutron flux shift toward the bottom of the core and slightly toward the center at Calvert Cliffs Unit No. 1. Baltimore Gas and Electric Company (BG&E) states that the flux shift, which increased the axial shape index and the peaking factors, has resulted in a derate of the unit to 92% of full power. In addition, the core ΔP is now 14.9 psi and decreasing slowly. BG&E finds that no Technical Specifications have been violated.

Investigations by BG&E and Combustion Engineering (CE) have concluded that the flux shift and increased core ΔP were the result of a crud buildup in the top of the core, caused by an abnormally high oxygen level in the primary coolant. This is confirmed by excessive usage of hydrogen through the volume control tank (normal means of oxygen removal). On October 29, 1979, the source of the oxygen inleakage was discovered in the purification system and isolated.

The licensee states that the core parameters are slowly returning to normal values. BG&E and CE are considering an increase in the pH of the RCS to assist in the removal of the crud and speed up the return to normal operation. The staff will continue to monitor this situation.

1435 051

STATUS OF SHUTDOWN PLANTS
(Nov. 9, 1979)

Arkansas 1	Modification of FW Pump	Restart 11/15/79
Arkansas 2	Core Internal Inspection	Restart 12/6/79
Browns Ferry 3	Reload	Restart 12/4/79
Calvert Cliffs 2	Refueling	Restart 11/17/79
Cook 1	RCP Vibration	Restart 11/10/79
Cook 2	Refueling	Restart 12/15/79
Davis-Besse 1	Replacing RCP Seals	Restart 11/13/79
Dresden 1	ECCS Modification	Restart 8/80
Farley 1	RCP Seal Leak	Restart 11/21/79
Fort St. Vrain	Refueling and installation of Luci Locks	Restart 12/7/79
Humboldt Bay	Seismic Evaluation	Restart ?
Indian Point 1	ECCS	Restart ?
Indian Point 3	Refueling	Restart 12/15/79
Millstone 2	Feedwater Line Crack Repair	Restart 12/7/79
North Anna 1	Reload	Restart 12/18/79
Palisades	Reload; Turbine Repair Work	Restart week of 12/3/79
Point Beach 1	Refueling	Restart 11/17/79
Salem 1	IE Bulletin 79-02	Restart 11/11/79
Surry 2	St. Gen. Replacement	Restart 4/80
Three Mile Island 1	Order	Restart ?
Three Mile Island 2	Accident	Restart ?
Trojan	S/G Tube Repair	Restart 12/4/79
Zion 1	Refueling/Feedwater Line Crack	Restart 11/24/79
Zion 2	Repair of Feedwater Line Cracks	Restart ?

1435 052

Status of Operating Plant Fire Protection Reviews

Phase 1 of the fire protection reviews for 68 operating reactor plants has been completed with the exception of the Salem #1 review. A licensing package on Salem #1 has been prepared in draft form. All outstanding issues have been resolved satisfactorily. The final package will be prepared and the Amendment issued during the week of November 12, 1979. A supplement will not be required for this SER.

1435 053

ENCLOSURE B

FW FEEDWATER PIPE CRACKING

IE Bulletin 79-13 Dated June 25, 1979

- Requirements:
- I. Plants with W or CE S/G's complete volumetric exam of FW within 90 days as follows:
 RT (supplemented by UT) of all FW nozzle-to-pipe welds & adjacent pipe and nozzle areas
 If Cracking identified, conduct volumetric exam of FW welds to 1st pipe support or snubber
 Visually exam FW pipe supports or snubbers in containment
 - II. At the next outage of sufficient duration or next refueling outage, perform the following inspections:
 - A. For S/G's with common AFW/FW nozzle, conduct volumetric examination of all FW pipe weld areas inside containment (includes AFW to FW connecting welds outside containment)
 - B. For S/G's with separate nozzles for FW/AFW, conduct volumetric examination of all welds inside containment upstream of the ring header or nozzle. For external feed ring header design, inspect all welds on one inlet riser of each feed ring.
 - C. Perform visual exam of all FW systems supports & snubbers in containment
 - III. If indications found in one unit of multi-facility, shut down and inspect other(s) unless continued operation justified
 - IV. Report cracking or discontinuities to IE region within 24 hours
 - V. Provide 20 day response for inspection schedule, emergency procedures and leak detection of FW in containment

STATUS: No. of plants inspected to date (total No. 44) 32 No. of plants with cracks/fabrication discontinuities 17 (includes 2 fabrication defects requiring repair)
 No. of plants reviewed/approved by staff 16 No. of plants inspected without cracks detected 15

PLANT	INSPECTION RESULTS	REMARKS	PROBABLE CAUSE	FOLLOW-UP INSPECTION RESULT	NRC LAB. ANALYSES
D.C. Cook 1/2	Cracked, 8 of 8, 2 thru wall	Piping repaired, instrd.*	Corrosion Assisted Fatigue		BNL/L ³
Beaver Valley 1	Cracked, 3 of 3	piping repaired	Corrosion Assisted Fatigue		BNL/L ³
Kewaunee	Cracked, 2 of 2	piping repaired	Corrosion Assisted Fatigue		BNL/L ³
North Anna 2	Fabrication defect, 1 of 3				BNL
Point Beach 2	Cracked, 2 of 2	piping repaired	Corrosion Assisted Fatigue		BNL/L ⁴
H.B. Robinson 2	Cracked, 3 of 3	piping repaired, instrd.	Corrosion Assisted Fatigue		BNL
Salem 1	Cracked, 4 of 4	piping repaired, instrd.	Stress Assisted Corrosion		BNL/L ³
San Onofre 1	Cracked, 3 of 3	piping repaired	Corrosion Assisted Fatigue		
Curry 1/2	Cracked, 3 of 3	piping repaired, instrd.	Corrosion Assisted Fatigue		
Ginna	Cracked, 2 of 2	piping repaired, instrd.	Corrosion Assisted Fatigue		
Millstone 2	Cracked, 2 of 2	Max. depth 0.110 in. instrd.	Not analyzed, inservice	re-examine 10/31/79	
Yankee Rowe	Cracked, 4 of 4	piping repaired	Gross fabrication defects		BNL
Palisades	Cracked, 2 of 2		Corrosion Assisted Fatigue		BNL
Farley 1	No cracks found	1/4" fab. defect			
Haddam Neck	No cracks found				
Indian Pt. 2	No cracks found				
Indian Pt. 3	No cracks found				
North Anna 1	No cracks found				
Pt. Beach 1	Performing inspection				
Prairie Island 1	No cracks found				
Prairie Island 2	Not inspected	Inspection to be performed 1/80			
Trojan 1	No cracks found				
Turkey Pt. 3	No cracks found				
Turkey Pt. 4	No cracks found				
Zion 1	Cracked, 4 of 4		Unknown at this time		
Zion 2	Cracked, 4 of 4				
Calvert Cliffs 1	No cracks found				
Calvert Cliffs 2	Performing inspection				
Arkansas Nuc. 2	No cracks				
Maine Yankee	No cracks found	5th weld from nozzle			
Fort Calhoun 1	Performing inspection				
St. Lucie 1	No cracks				
Indian Pt. 1	Not inspected	Shutdown			
TMI-1	Not inspected	Shutdown			
TMI-2	Not inspected	Shutdown			
David Besse 1	No cracks found				
Arkansas Nuc. 1	Not inspected				
Oconee 1	Not inspected				
Oconee 2	Not inspected				
Oconee 3	Not inspected				
Crystal River 3	No cracks found				
Rancho Seco	Not inspected				

*Instrumented

1435 054

OFFICE OF STANDARDS DEVELOPMENT

IMPORTANT EVENTS FOR THE WEEK ENDING NOVEMBER 9, 1979

1. On November 5, 1979, R. B. Minogue signed a Memorandum of Understanding with the Smithsonian Science Information Exchange (SSIE) regarding submission of information reports on research and development activities dealing with non-radioactive toxic substances. Creation of a centralized information repository for all Federal agencies doing research on toxic substances was unanimously agreed upon by the Toxic Substances Strategy Committee (TSSC) as a recommendation in its draft report to the President. Mr. Minogue, as NRC's representative on TSSC, was authorized to sign the MOU by a memorandum from S. J. Chilk dated December 6, 1978 re: SECY-78-606.

Information will be submitted to SSIE by each signatory agency starting in FY 80. Effects upon NRC are expected to be minimal due to the small number of such studies being conducted currently and the even smaller number anticipated. Effort involved in preparing the reports should be small, since current RES information reporting formats and procedures are expected to be adequate to transmit the information with little or no modification.

The other agencies signing MOU's with SSIE are:

- Department of Agriculture
- Department of Commerce
- Consumer Product Safety Commission
- Environmental Protection Agency
- Department of Energy
- Department of Health, Education & Welfare
- Department of Interior
- National Science Foundation
- Department of Labor
- Department of Transportation
- Department of State

Concurring in this cooperative effort by the agencies are:

- Council on Environmental Quality
- Office of Science and Technology Policy
- Office of Management and Budget

Contacts: F. Arsenault, RES
427-4350
R. Grill, SD
443-5966

1435 055

2. Meeting on Cytogenetic Effects: On November 8, 1979 Dr. William Brandom, a developmental geneticist at the University of Denver, presented results of his study of cytogenetic effects in workers at the Rocky Flats Facility in Colorado.

Dr. Brandom also discussed the practicability of using the occurrence of chromosomal changes in circulating lymphocytes as a quantitative indicator of radiation exposure. Also discussed was the subject of a chromosomal registry to be used as baseline data for potential high radiation exposure subpopulations. He does not endorse using this technique for examining members of the general population or large numbers of people exposed to low-level radiation because of the expense and the time consuming nature of the procedure.

SD is bringing Dr. Brandom on board as a consultant in genetics.

Contact: R. Goldsmith
443-5860

Publications Issued During the Week of November 5-9, 1979

Draft Regulatory Guide and Value/Impact Statement: Calibration and Error Limits of Air Sampling Instruments for Total Volume of Air Sampled, Task OH 905-4
[Comments requested by January 7, 1980]

1435 056

OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS

Items of Interest

Week Ending November 9, 1979

Meeting with OTA on Safeguards for Radioactive Waste

On October 31, 1979, members of the Division of Safeguards participated in a meeting requested and attended by Lucia Turnbull and Thomas Cotton of the Office of Technology Assessment (OTA). OTA is initiating a study on the disposal of radioactive waste and was particularly interested in discussing safeguards requirements for radioactive waste, especially commercially generated spent power reactor fuel.

Briefing to DOE on ISIS

On November 8, 1979, Mr. Thomas Thayer is scheduled to brief Mr. George Weisz, Director, Office of Safeguards and Security, DOE, on the status of ISIS and current NRC ISIS - related activity.

Interim Report on the Impact of the Safeguards Upgrade Rule on NPR Licensees

A draft of the interim report on the impact of the Safeguards Upgrade Rule on NPR licensees has been completed. The report reexamines the 22 NPRs that might be affected by the Upgrade Rule to determine what safeguards credit might be given for enrichment, type and form of the SSNM and what the NPR licensees are doing to reduce their SSNM possession. To date almost all licensees are trying to reduce the amount of SSNM on hand and are establishing programs to keep the fuel in the core at radiation levels above 100 rem/hr at 3 feet.

International Safeguards Reporting Information

On November 6, 1979, members of the Safeguards Division staff participated in a meeting with representatives of the Department of State, Arms Control and Disarmament Agency, and the Department of Energy, to consider apparent problems in the development of the reporting program required to supply the IAEA with routine accounting data under the upcoming implementation of the US/IAEA Safeguards Agreement. Follow-on action was accepted by appropriate participants to assure that our commitments are met in a prompt and efficient manner.

1435 057

Work on Development of ALARA Program for Effluent Releases

NMSS staff members visited the National Institute of Health in Bethesda to discuss how they control releases of radioactive materials to the environment, how these releases are monitored and the magnitude of these releases. The visit is a part of the staff's development of an ALARA program that focuses on effluent releases.

Fuel Receiving and Storage Station, Barnwell, South Carolina

In late October, a Board Notification was sent to the ASLB regarding the application by Allied-General Nuclear Services (AGNS) for operation of the Fuel Receiving and Storage Station (FRSS) at Barnwell, South Carolina. This proceeding has been dormant since May 1977 and the staff is not aware of any specific plans to resume activities by any of the parties; nevertheless the staff recently became aware of information that it deemed relevant and material to any future FRSS proceedings. The notice advised the Board that an apparent fault had been observed and photographed previously in a trench at the Chem-Nuclear Services low-level burial ground site which is adjacent to the AGNS site. Following telephone calls between the South Carolina Governor's office and the Director of NMSS, an NRR staff geologist and a NM hydrologist went to the Chem-Nuclear Services site on October 31 to investigate the situation, along with State officials and a United States Geological Survey (USGS) representative. While there, another apparent fault was observed in an open burial trench. (The trench containing the earlier reported fault had since been filled.)

The NRC and other officials determined that the fault or faults poses no hydrologic problem that would significantly affect water pathways at the low-level waste burial ground. However, no determination was made regarding seismologic implications on nearby structures such as exist at AGNS. NMSS staff followed its Board Notification with a telephone call to AGNS officials to inform them of the most recent observation. It is the staff's understanding that AGNS intends to conduct further investigation, consulting with Chem-Nuclear and the State, to assess the significance of the fault to the AGNS site before the trench is filled.

NRC/DOE Meeting Re 10 CFR 60

1435 058

On November 7, 1979, DOE personnel met with members of NMSS, SD, and ELD to discuss strawman technical criteria for high level waste repositories proposed by the NRC staff. A list of ten points of DOE concern was discussed and a 39-page list of specific recommended changes was delivered for NRC's consideration. Although DOE still has a number of problems with the NRC staffs' technical approach, a number of areas of mutual agreement were established and other apparent areas of disagreement were found to be differences in interpretation of the wording of the strawman criteria.

Richland Burial Site Licenses

Waste Management staff met with Washington State Department of Social and Health Services in Olympia, Washington, October 30 through November 2, 1979. The purpose was to discuss problems regarding the disposal site near Richland and to jointly prepare new draft NRC and State licenses for the disposal facility. State and NRC staff are finalizing the language in the drafts this week and each agency plans to forward the proposed license to Nuclear Engineering Company and state that each is prepared to issue such a license in thirty days. The draft licenses comprehensive address those aspects of operations which can be reasonably controlled at the site. Upgraded packaging and inspections of shipments are included.

1435 059

OFFICE OF INSPECTION AND ENFORCEMENT

Items of Interest

Week Ending November 9, 1979

1. Preliminary Notifications relating to the following actions were dispatched during the past week:
 - a. PNO-I-79-15 Millstone Unit 2 - Contaminated Material Found Outside of Restricted Areas
 - b. PNO-I-79-16 General Services Administration, Curtis Bay, Maryland - Television Report on Storage of Radioactive Materials at GSA Depot, Curtis Bay, Maryland
 - c. PNO-I-79-17 Millstone Unit 2 - Repair of Steam Generator Feedwater Piping Cracks
 - d. PNO-II-79-22 State of Alabama Concurrence Exercise
 - e. PNO-II-79-23 Brunswick Unit 1 - Reactor Trip on Low Water Level
 - f. PNO-II-79-24 & -24A North Anna Units 1 & 2 - Seismic Analysis Errors
 - g. PNO-II-79-25 North Anna Units 1 & 2 - Safety Function Reset Design Errors
 - h. PNO-II-79-26 Summer Unit 1 - Anticipated Media Interest in NRC Investigation
 - i. PNO-II-79-27 Farley Unit 1 - Fire in Cooling Tower
 - j. PNO-II-79-28 Summer Unit 1 - Omission of Safety Circuit Test
 - k. PNO-II-79-29 Farley Unit 1 - Unit Shut Down to Repair Reactor Coolant Pump Seals
 - l. PNO-III-79-18C Zion Unit 1 - Linear Indications in the Feedwater Nozzle to Pipe Welds
 - m. PNO-III-79-29A Zion Unit 2 - Twenty-Four Hour Notification of Cracking in the Steam Generator to Feedwater Piping
 - n. PNO-III-79-33 Callaway Unit 1 - Employment Discrimination Claimed by Mr. W. Smart
 - o. PNO-III-79-34 Big Rock Point - Unit Restart After an Extended Outage
 - p. PNO-III-79-35 Prairie Island - Neutralizing Tank Batch Release With a pH Greater Than Technical Specification Limit
 - q. PNO-IV-79-12 River Bend Units 1 & 2 - Irregularities in Concrete Materials Tests Conducted by Southwestern Laboratories (Fort Worth/Dallas)

1435 060

ENCLOSURE E

- r. PNO-IV-79-13 South Texas Project Units 1 & 2 - Alleged Intimidation of Civil QC Inspectors at the South Texas Project, Units 1 & 2
 - s. PNO-V-79-9 San Onofre Unit 1 - Manual Shutdown of San Onofre Unit 1
 - t. PNS-I-79-06 Indian Point Unit 3 - Bomb/Extortion Threat
 - u. PNS-I-79-07 Millstone - Arrest of Contractor Employee in Facility Parking Lot
 - v. PNS-II-79-5 Carolina Power and Light Company - Bomb Threat
 - w. PNS-II-79-6 General Electric Company, Wilmington, NC - Bomb Threat
 - x. PNS-II-79-102K Nuclear Fuel Services, Inc., Erwin, TN - Inventory Difference in Excess of License Conditions
 - y. PNS-III-79-01 Clinton Unit 1 - Bomb Threat
 - z. PNS-V-79-1 Trojan - Arrests of Off-Duty Guards and Former Guards for Traffic in Narcotics
2. The following IE Bulletin was issued:
- a. IE Bulletin 79-17, Revision 1, "Pipe Cracks in Stagnant Borated Water Systems at PWR Plants," was issued on October 29, 1979 to all pressurized water reactor facilities with an operating license.
3. The following IE Information Notices were issued:
- a. IE Information Notice 79-26, "Breach of Containment Integrity," was issued on November 5, 1979 to all power reactor facilities with an operating license or a construction permit.
 - b. IE Information Notice 79-12A, "Attempted Damage to New Fuel Assemblies," was issued on November 9, 1979 to all power reactor facilities, research reactors and fuel facilities.

1435 061

ITEMS OF INTEREST
OFFICE OF INTERNATIONAL PROGRAMS
WEEK ENDING NOVEMBER 9, 1979

INTERNATIONAL COOPERATION

Foreign Visitors to NRC

On Monday, a five-member delegation, headed by Mr. J. P. Chien, Director of the Institute of Nuclear Energy Research (INER), Taiwan Atomic Energy Council, met separately with Chairman Hendrie, Commissioner Ahearne, and J. R. Shea R. S. Senseney of IP, to discuss current nuclear issues.

On Monday, an eight-member Japanese delegation, headed by Governor Fujio Takeuchi of the Ibaraki Prefecture met with Chairman Hendrie, H. R. Denton and F. Pagano of NRR and J. Shea and R. S. Senseney of IP to discuss the incident at TMI and its impact on NRC.

On Monday, a three-member delegation, headed by Captain Ingeniero Rene Arnaldo Romero of the Argentine National Atomic Energy Commission (CNEA), met with R. F. Burnett and staff members of SG/NMSS to discuss the physical protection of nuclear facilities and materials.

On Tuesday, a three-member delegation, headed by Mr. C. F. Gnosspelius of the Swedish Nuclear Training Center (AKU) met with R. A. Cooley of OLB/NRR to discuss important changes in NRC's training philosophy and requirements post-TMI.

On Tuesday, Mr. J. N. Tweedy of the South of Scotland Electricity Board met with R. H. Vollmer of DOR/NRR to discuss TMI.

On Wednesday, Mr. K. Kodama, Deputy Director General of the Japanese Agency for Natural Resources and Energy (ANRE), Ministry of International Trade and Industry, and H. Kurihara, Science Counselor of the Embassy of Japan, met with Commissioner Ahearne and H. Faulkner of IP to discuss NRC's siting criteria and its ramifications for both the U.S. and Japan.

On Thursday, Mr. Takao Fujie of the Japan Atomic Power Company met with R. Ireland of DSS/NRR to discuss TMI-related lessons learned in the area of licensing. This meeting was a continuation of discussions originally scheduled for Wednesday, October 31, 1979.

On Thursday, Messrs. Lars Andermo and Jan Mattson of the Swedish Nuclear Power Inspectorate (SKI) met with representatives of NRR's Reactor Systems Branch, Accident Analysis Branch, and Core Performance Branch to discuss (1) methods to detect leakage inside the containment and (2) some generic problems related to Westinghouse PWR ECCS evaluation.

On Thursday, a three member delegation from the French Ministry of Industry (M.I.) met with representatives of the Engineering Branch, DOR/NRR to discuss U.S. and French experience with cracks under cladding.

1435 162

On Friday, a five-member Belgian delegation, headed by Mr. P. Dozinel, Deputy Manager of Traction-Electricité, met with W. Minners of DSS/NRR and J. Holman of OLB/NRR to discuss TMI lessons learned and possible future effects on the regulatory process.

On Friday, a four member Japanese delegation, headed by Professor S. Aoki, Chairman of the Advisory Committee on Nuclear Power Safety, met with W. Minners of DSS/NRR and J. Holman of OLB/NRR to discuss (1) single failure criteria, (2) operator interactions, and (3) inerting BWR containments.

Bilateral Meeting

IP is coordinating NRC's participation in the first U.S.-Japan Bilateral Meeting on LWR Safety Cooperation, which has been called to implement understandings reached by President Carter and Prime Minister Ohira early this summer. The meeting will be held November 13-14, 1979, in Room 1105 at the Department of State. J. Shea is leading the NRC delegation, which includes representatives from RES, NRR, and IP. The Japanese delegation will be headed by Minister Sumiya of the Japanese Embassy.

* Foreign Reports

1435 063

EXPORT/IMPORT AND INTERNATIONAL SAFEGUARDS

Meeting of the U.S Action Plan Working Group for IAEA Safeguards

IP (Ken Cohen) participated in a meeting of the APWG at the State Department on November 6. Other participants included representatives from NMSS, ACDA, State, and DOE. The principal focus of the meeting centered on the review of work plans I.B.2 and V.B.2 and discussion of the APWG Status Report which, while delayed from its original September target date, is expected to be completed by the end of January. The next meeting is scheduled for November 27.

Meeting on US/IAEA Safeguards Agreement

On November 6 an interagency meeting was held on the status of preparations to implement the US-IAEA Safeguards Agreement. DOS, DOE, ACDA, and NRC personnel participated. NRC offices represented were IP, ELD, NMSS, and SD. The focus of the meeting was an update briefing by Mr. D'Agostino (DOE) on revision of the Nuclear Materials Management and Safeguards System (NMMSS) to facilitate the reporting requirements of the Safeguards Agreement. Mr. D'Agostino was assisted by personnel from Union Carbide, Oak Ridge, and NMSS.

Meeting with Australian Delegation on Implementing the new Agreement for Cooperation

On November 9 an interagency team (State, DOE, and NRC) met with an Australian delegation to discuss the application of safeguards to, and the tracking of, Australian origin uranium within the United States. NRC was represented by J. C. Kessler, IP, and E. Perchonok and E. Sparks, NMSS. A classified memorandum of conversation will be prepared on this meeting.

1435 064

OFFICE OF STATE PROGRAMS

ITEMS OF INTEREST

WEEK ENDING NOVEMBER 9, 1979

Emergency Preparedness

Robert DeFayette participated in a meeting in Wiscasset, Maine with Selectmen and town Civil Defense Director of Lincoln County to discuss emergency planning requirements in support of Maine Yankee.

Messrs. Cleveland, Clevenger and Van Niel provided Office of State Programs support to NRR site review team visits to Arkansas Nuclear One, St. Lucie and Zimmer respectively.

Dick Cleveland will speak to the Citizens Commission on Nuclear Power in Cincinnati, Ohio on Saturday, November 10, 1979.

Hal Gaut chaired a meeting of the Federal Interagency Headquarters Advisory Committee for RERP.

The Atlanta Regional Advisory Committee for emergency preparedness observed the exercise of the Alabama Radiological Emergency Response Plan (RERP) in conjunction with the Farley plant.

A funding law for radiological emergency response plans (RERP) was enacted on October 22, 1979 by Governor Byrne of New Jersey. New Jersey is the fourth State to enact a funding law for RERP. The others are Oregon, Illinois and California. The New Jersey law would permit up to \$250,000 annually of the franchise and gross receipts taxes imposed on the nuclear power station by the State to be granted to the affected counties and municipalities for the purpose of preparing, testing and implementing nuclear emergency response plans.

1435 065

ENCLOSURE I

OFFICE OF MANAGEMENT AND PROGRAM ANALYSIS

Items of Interest

WEEK ENDING - NOVEMBER 9, 1979

MIS Publications

Distributed September issue of "Operating Unit Status Report" (Gray Book).

Emergency Preparedness

Prepared for Ray Smith, Emergency Preparedness Coordinator, a detailed listing of objectives and schedules for actions identified by task force to upgrade emergency preparedness.

1435 066

ENCLOSURE J

Office of the Controller

Item of Interest

Week Ending November 9, 1979

Trip with Congressional Staff

Bruce Cooper, Director, Division of Budget accompanied Dave Olson, House Appropriations Committee staff to Idaho, Region V, and the Radiological Emergency Operations Center in Nevada.

1435 067

Enclosure K

CALENDAR OF SIGNIFICANT EVENTS

November 17, 1979	FNP	ACRS Subcommittee meeting in Los Angeles.
November 20, 1979	LaSalle 1&2	Site visit for fire protection.
November 20, 1979	North Anna 2	Meeting to discuss Environmental Qualification of equipment.

1435 J68

CALENDAR OF SPEAKING ENGAGEMENTS

NOVEMBER

- November 12 Dr. Allen Brodsky, Keeping Radiation Exposures as Low as Reasonably Achievable, NC State University with Chapters of Professional Societies, NC State University, Raleigh, NC
- November 14 Dr. Allen Brodsky, Epidemiology and Radiation Protection (Wright H. Langham Memorial Lecture), University of Kentucky, Department of Health Radiation Sciences, Lexington, KY
- November 15 Dr. Allen Brodsky, Public Health and the Peaceful Atom: The Radiation Debate - Symposium: The Significance of Low-Level Radiation to Human Health, University of Kentucky Inter-Disciplinary Committee, Lexington, KY
- November 28 Information Security Oversight Office (ISOO) Annual Symposium, "Executive Order 12065 - A Year Later," "NRC's Development and Use of Classification Guides - Raymond J. Brady

DECEMBER

- December 10-13 Stephen McGuire will speak before the Health Physics Society Mid-Year Symposium on "Safety Training for Industrial Radiographers" in Honolulu, Hawaii
- December 10-14 John McGrath will present a paper entitled "The NRC Program for Training of State Radiation Control Personnel" before the Health Physics Society Mid-Year Symposium, Honolulu, Hawaii

1435 J69



77C

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 1000
ARLINGTON, TEXAS 76012

November 16, 1979

In Reply Refer To:

RIV

Docket No. STN 50-482/IE Circular No. 79-22

Kansas Gas & Electric Co.
Attn: Mr. Glenn L. Koester
Vice President-Operations
Post Office Box 208
Wichita, Kansas 67201

Gentlemen:

The enclosed IE Circular No. 79-22, is forwarded to you for information. No written response is required. Should you have any questions related to your understanding of this matter, please contact this office.

Sincerely,

Karl V. Seyfrit
Karl V. Seyfrit
Director

Enclosures:

1. IE Circular No. 79-22
2. Recently Issued
IE Circulars

cc: w/enclosures

Messrs. Nicholas A. Petrick, SNUPPS
D. T. McPhee, Kansas City Power and Light Company
Gerald Charnoff, Shaw, Pittman, Potts & Trowbridge
E. W. Creel, Kansas Gas and Electric Company

1435 070

7911290 180 Q

SSINS: 6830
Accession No.:
7908220142

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

IE Circular No. 79-22
Date: November 16, 1979
Page 1 of 1

STROKE TIMES FOR POWER OPERATED RELIEF VALVES

Description of Circumstances:

Most PWRs utilize power-operated relief valves (PORVs) to prevent overpressurization of the reactor coolant system when the reactor is at low temperature. On April 13, 1979, during a pressure transient at Robinson 2, the PORVs did not function as rapidly as intended. The estimated stroke time for the PORVs was three to five seconds whereas the intended stroke time is two seconds. As a result, the pressure transient did approach a pressure limit which is based on nil ductility considerations. Prior to April 13, the PORVs had not been used or exercised since February 1978, when they had been repacked and stroked. Although the valve stems were scored at that time, stroke times were satisfactory. The licensee and the valve manufacturer believe that the scored stems and the 14-month interval without exercise resulted in poor performance of the PORVs.

Recommended Actions for Licensees' Consideration:

All holders of PWR operating licenses or construction permits should be aware of the potential problem of the type discussed above. Because of the generic implications in this matter, it is recommended that both licensees of operating facilities and holders of construction permits conduct a review to determine if periodic surveillance of PORVs is necessary to assure that the PORVs will perform as intended.

No written response to this Circular is required. If you require additional information regarding these matters, contact the Director of the appropriate NRC Regional Office.

1435 071

IE Circular No. 79-22
November 16, 1979

RECENTLY ISSUED
IE CIRCULARS

Circular No.	Subject	Date Issued	Issued To
79-14	Unauthorized Procurement and Distribution of XE-133	7/13/79	All Medical Licensees Except Teletherapy Medical Licensees and to all Radiopharmaceutical Suppliers
79-15	Bursting of High Pressure Hose and Malfunction of Relief Valve "O" Ring in Certain Self-contained Breathing Apparatus	8/8/79	All Materials Priority I, Fuel Cycle and Operating Power Reactor Licensees
79-16	Excessive Radiation Exposures to Members of the General Public and a Radiographer	8/16/79	All Radiography Licensees
79-17	Contact Problem in SB-12 Switches on General Electric Company Metalclad Circuit Breakers	8/14/79	All Power Reactor Licensees with a Construction Permit (CP) and/or Operating License (OL)
79-18	Proper Installation of Target Rock Safety-Relief Valves	9/10/79	All Holders of a Power Reactor Operating License (OL) or Construction Permit (CP)
79-19	Loose Locking Devices on Ingersoll-Rand Pumps	9/13/79	All Power Reactor Licensees with a Construction Permit (CP) and/or Operating License (OL)
79-20	Failure Of GTE Sylvania Relay, Type PM Bulletin 7305, Catalog 5U12-11-AC With A 120V AC Coil	9/24/79	All Power Reactor Licensees with a Construction Permit (CP) and/or Operating License (OL)
79-21	Prevention of Unplanned Releases of Radioactivity	10/19/79	All holders of Power Reactor Operating Licenses (OLs) or Construction Permits (CPs)

Enclosure

1435 172