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December 5, 1979

WILLIAM CAVANAUGH III
Vice President
Generation & Construction

1-129-3
2-129-2

Director of Nuclear Reactor Regulation
ATTN: Mr. Darrell G. Eisenhut, Acting Director
Operating Reactors
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Subject: Arkansas Nuclear One-Units 1 & 2
Docket Nos. 50-313 & 50-368
License Nos. DPR-51 & NPF-6
Lessons Learned Task Force
Short-Term Recommendations
(File: 1510, 2-1510)

Gentlemen:

Subsequent to our submittal of November 20, 1979, concerning implementation of NUREG-0578 requirements, we have continued to improve our schedules where possible. Based on these efforts and requests by members of your staff to clarify previous commitments, a revision of selected responses is hereby provided. Accordingly, the attached revised pages supercede and should replace those in our previous submittal.

Implementation schedules for the "short-term" Lessons Learned items will require shutdowns of approximately three weeks for each of our nuclear units. Until this time, we had planned concurrent shutdowns for both units on December 31, 1979. Our recent evaluations have concluded a concurrent shutdown of these units is not in the best interest of our commitment to provide a reliable source of power generation to our customers, continuity in the ANO-2 Startup Program, and utilization of our experienced personnel.

The ANO-2 Startup Program predicts operation at 80-100% power (912 MWe rated capacity) during the January 1980 period. If concurrent shutdowns were required, our system generating capacity would not have at its disposal a total of approximately 1,700 MWe. With sequential shutdowns, our fossil units would be allowed to maintain preventive maintenance outages to ensure our ability to meet customer demands duing peak summer months.

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Shutdown of ANO-2 on December 31, 1979, would interrupt the ANO-2 Start-up Program. Continuity of this program is important to obtaining the most reliable information and to ensuring our startup organization remains intact and functioning efficiently rather than being disbanded to participate in an outage. Also, concurrent shutdowns would not allow best utilization of our experienced manpower. An ANO-2 outage following startup of ANO-1 would allow for incorporation of the knowledge and experience gained to assure the least adverse effect on unit downtime.

Based on our current assessment of the negative effects of concurrent shutdowns, we are proposing a revision to our shutdown schedule. ANO-1 will be shutdown on December 31, 1979. The hardware modifications indicated in our responses as being completed by the required implementation date will be completed during this outage. Implementation of ANO-2 hardware modifications will continue where possible during this period while the unit is at power. Following restart of ANO-1 and completion of the startup testing program on ANO-2 (now scheduled to be completed on about February 1, 1980), ANO-2 would be shut down to complete the hardware modifications indicated in our NUREG-0578 response as being completed by the required implementation date. If an outage should be required prior to completion of the startup testing program, the Lessons Learned modifications will be made provided the outage is of sufficient duration. The ANO-2 shutdown would commence no later than February 15, 1980. Those items requiring modifications to or implementation of procedures will not be affected by the unit shutdown schedule.

As ANO-2 was recently licensed and already meets several of the NUREG-0578 requirements, we contend that sequential shutdowns would better serve our shared interests in protecting the health and safety of the public and in providing reliable electric power to our customers. As always, we are available to discuss our schedules regarding implementation of the Lessons Learned requirements.

Also, our letter of November 20, 1979, stated we had documented our method of compliance with Item 2.1.7.a of NUREG-0578 via our October 31, 1979 letter. We asked for your concurrence of our proposed design by December 3, 1979. In order to maximize our compliance with the requirements of NUREG-0578, may we have your concurrence as soon as possible.

Very truly yours,

William Cavanaugh, III

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Attachments

ARKANSAS NUCLEAR ONE - UNITS 1 and 2 RESPONSES TO D. EISENHUT LETTER DATED SEPTEMBER 13, 1979 AS SUPPLEMENTED BY H. DENTON'S LETTER DATED OCTOBER 30, 1979

Item a

The staff will be proposing a new rule on a Limiting Condition of Operation to require plant shutdown for certain human or procedural errors, particularly those which are repetitive in nature. As such, no action is required on your part at this time.

Response - ANO-1 and 2

No response required.

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Item b

At the present time we are delaying efforts regarding proposed rulemaking on both the inerting requirements for Mark I and II BWR containments, and the requirements regarding hydrogen recombiner capability; accordingly, no action is required on your part at this time.

Response ANO-1

Although no response is required, we believe it important to note that ANO-1 does have a dedicated, redundant, safety-grade Hydrogen Purge System.

Response ANO-2

Although no response is required, we believe it important to note that ANO-2 has dedicated and safety-grade Hydrogen Recombiners and one Hydrogen Purge System.

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Item c

The ACRS comments on the shift technical advisor have resulted in our reassessment of the possible means of achieving the two functions which the Task Force intended to provide by this requirement. The two functions are accident assessment and operating experience assessment by people onsite with engineering competence and certain other characteristics. We have concluded that the shift technical advisor concept is the preferable short-term method of supplying these functions. We have also concluded that some flexibility in implementation may yield the desired

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Item e

An additional requirement following issuance of NUREG-0578, which concerned a remotely operable high point vent for gas from the reactor coolant system, was developed.

Response - ANO 1

A generic design effort, to which AP&L is committed, is underway by B&W to provide a functional description of the construction, location, size, and appropriate power supply for reactor coolant system high point vents. Appropriate safety analyses considering the effects of such vents are also being pursued. Current scheduling indicates B&W will transmit a preliminary design and analysis for reactor coolant system vents on December 21, 1979. We will review the preliminary design and provide this to you in January 1980.

Providing the results of this investigation do not reveal any significant safety issues with regard to installation of such vents, we will install high point vents as appropriate from these analyses.

Provided the evaluations are completed as expected, these vents should be installed by January 1, 1981, contingent upon NRC approval and equipment availability.

Response - ANO-2

A generic design effort, to which AP&L is committed, is underway by CE to provide a functional description of the construction, location, size, and appropriate power supply for reactor coolant system high point vents. Appropriate safety analyses considering the effects of such vents are also being pursued. Current schedule indicates that the above items and a conceptual design will be submitted to you for your review by January 1,1980.

Providing the results of this investigation do not reveal any significant safety issues with regard to installation of such vents, we will install high point vents as appropriate from these analyses.

Provided the evaluations are completed as expected, these vents should be installed by January 1, 1981, contingent upon NRC approval and equipment availablity.

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Item f

The Lessons Learned Task Force has compiled a set of errata and clarifying comments for NUREG-0578.

Recommendation 2.1.1 - Emergency Power Supply Requirements for Pressurizer Heaters, Power Operated Relief Valves and Block Valves, and Pressurizer Level Indicators in PWRs.

Response - ANO-1

PRESSURIZER HEATERS - B&W has determined that 126 Kw of pressurizer heater capacity is necessary within 2 hours following a loss of offsite power to assure proper control for natural circulation in the hot standby condition.

The two existing sets of 84 Kw of proportional heaters are each connected to a diesel generator bus. These heaters are not tripped upon ESAS.

42 Kw of supplemental heaters will be powered from the swing bus (can be connected to either diesel) and energized manually from the control room. Tripping these heaters upon ESAS is not necessary for diesel generator load protection.

POWER OPERATED RELIEF VALVES - Currently the ANO-1 PORV is powered from safety grade D.C. power (channel 1, red) and the block valve is powered from black (nonsafety) A.C.

We will provide safety grade AC motive and control power (channel 2, green) to the PORV block valve. The power source only will be safety grade appropriately isolated with qualified, safety grade interface devices to isolate the safety from the nonsafety grade portions of the system. This will be completed by January 1, 1980.

PRESSURIZER LEVEL INDICATORS - Currently the ANO-1 pressurizer level indicators are safety grade, qualified, and powered from safety buses. Therefore, we meet this recommendation and no modifications are necessary.

Response - ANO-2

PRESSURIZER HEATERS -
Currently, ANO-2 has 300 Kw of Pressurizer Heaters powered from safety buses (150 Kw from each vital bus).

150 Kw of pressurizer heaters (assuming single failure) is sufficient to maintain natural circulation in a hot standby condition assuming integrity of the Reactor Coolant System.

In establishing emergency power to the pressurizer heaters, priority has been given to LOCA and MSLB loads.

The pressurizer heaters powered from the safety buses are automatically shed when the Diesel Generators are providing power (i.e. automatically shed upon a transfer from off-site to emergency power sources).

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Procedures will be developed by January 1, 1980, to manually reload the pressurizer heaters onto the emergency power sources with consideration given to:

a) Which ESF loads may be shed for a given situation.

b) Instrumentation and criteria for operator use to prevent overloading a diesel generator.

The class IE interface for main power and control power are protected by qualified class IE isolators.

POWER OPERATED RELIEF VALVE - The ANO-2 design does not incorporate a PORV and associated block valve, therefore no modifications are necessary.

PRESSURIZER LEVEL INDICATORS - Currently the ANO-2 pressurizer level indicators are safety grade, qualified, redundant, and powered from safety buses. Therefore, we meet this recommendation and that no modifications are necessary.

* *

Recommendation 2.1.2 - Performance Testing for BWR and PWR Relief and Safety Valves.

Response ANO-1 and 2

AP&L is committed to programs currently underway by B&W and CE to provide input and support to an industry wide qualification program (EPRI). Every effort is being made to support and encourage these programs and to meet your recommended schedule. Our program and schedule will be submitted by January 1, 1980.

* *

Recommendation 2.1.3a - Direct Indication of Power Operated Relief Valve and Safety Valve Position for PWRs and BWRs.

Response - ANO-1 and 2

We currently have on order acoustic monitoring devices which will provide positive indication and annunciation of an open valve in the control room. These will be installed immediately downstream of the two pressurizer code safeties and the PORV on ANO-1 and immediately downstream of the two pressurizer code safeties (ANO-2 does not have a PORV) on ANO-2.

These devices, procured from B&W, are the only ones available to our knowledge. They are manufactured from the best available equipment. The preamps are the same type used in the TMI-2 acoustic monitoring system which survived longer than most electrical equipment in the TMI-2 Reactor Building thereby demonstrating a substantial degree of qualification.

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The units have been seismically tested and are single failure proof, testable, and will be supplied safety grade power. They do not, however, have sufficient QA documentation to classify them as safety grade and cannot be classified as qualified. We are investigating generic qualification of the units and will report the results of our investigation and a schedule for qualification, if feasible, by January 1, 1980.

The acoustic monitoring devices will be installed on ANO-1 by January 1, 1980, and during the February 1980 shutdown for ANO-2.

Temperature elements downstream of the PORV and safety valves on ANO-1 and downstream of the safety valves on ANO-2 provide backup indication of valve position. These are monitored in the control room and alarm on high temperature. Guidance in monitoring test instruments will be added to the applicable procedures by January 1, 1980.

* *

Recommendation 2.1.3.b - Instrumentation for Detection of Inadequate Core Cooling in BWRs and PWRs.

Response - ANO-1

AP&L is committed to a generic B&W program which will identify existing instrumentation to be used for interim detection of inadequate core cooling and will determine what additional instrumentation, if any, is needed. This program was documented in the NRC minutes of the August 9, 1979 meeting with the B&W Owners Group. Due to the significant and thouough scope of this effort, new instrument requirements and conceptual designs will not be provided to us from B&W until January 31, 1980, and will beforwarded to you in February 1980. Guidelines for loss of RCS inventory with and without the RCP's have been developed into procedures which are now being utilized. Guidance for detection of inadequate core cooling during refueling will be issued by B&W on December 14, 1979, and incorporated into appropriate procedures in January 1980.

Every effort will be made to install instrumentation determined necessary by the above evaluation by January 1, 1981, subject to equipment availability and NRC reviews. These modifications, if applicable, will include an unambiguous indication of Reactor Vessel Water Level.

We have ordered two redundant, safety grade, primary coolant saturation meters which will provide, in the control room, on-line continuous indication of coolant saturation condition. Safety grade, wide range, redundant, temperature inputs will be provided. A dedicated safety grade pressure input will be provided to each meter. The saturation meters will be installed by January 1, 1980, and upgraded to completely safety grade in May 1980.

The interim installation will use non-safety grade temperature input bridges until qualified components arrive in May, 1980.

The existing computer inputs allow back up indication upon request, also, the existing display instrumentation in the control room has the capability of being manually interpreted for saturation conditions.

Appropriate steps are being taken to ensure that the addition of the safety grade saturation meters will not adversely impact the reactor protection system or engineered safety features system. For the above reason, delivery schedules do not allow a safety grade system to be installed by January 1, 1980, as interfact requirements must be maintained by B&W/Bailey Meter, the original supplier of the protection equipment.

Response - ANO-2

AP&L is committed to a generic CE program which will determine what additional instrumentation, if any, is needed for detection of inadequate core cooling. Due to the significant and thorough scope of this effort, instrument requirements, conceptual designs, and generic procedures will not be submitted until March 1, 1980.

This is the most expedited schedule. Provided the scope of this effort is not beyond our expectations, we will develop appropriate plant specific procedures and provide training within 60 days of completion of this effort.

Every effort will be made to install instrumentation determined necessary by the above evaluation by January 1, 1981, subject to equipment availability and NRC reviews. These modifications will include an unambiguous indication of Reactor Vessel Water Level.

We have ordered two redundant, safety grade, primary coolant saturation meters which will provide, in the control room, on-line continuous indication of coolant saturation condition. Wide range, safety grade redundant temperature inputs will be provided. A dedicated safety grade pressure input will be provided to each meter.

The safety grade saturation meter will be installed during the February 1980 outage. Interim measures (as described in our response to IE Bulletin 79-06B) will remain in effect. Appropriate steps will be taken to ensure that the addition of the safety grade saturation meters will not adversely impact the reactor protection or engineered safety features systems.

* *

Recommendation 2.1.4 - Containment Isolation Provision for PWRs and BWRs.

Response - ANO-1

Our response to IE Bulletin 79-05A (dated April 16, 1979) identified all essential and non-essential systems and committed to provide diverse containment isolation signals and modifications which we believe will conform to your recommendations. B&W is currently evaluating our proposed modifications to assess their effectiveness. We anticipate these modifications will be implemented by January 1, 1980.

Response - ANO-2

Our response to IE Bulletin 79-06B (August 16, 1979) identified all essential and non-essential systems and committed to provide certain modifications which we believe will conform to your recommendations. CE is currently evaluating our proposed modifications to assess their effectiveness. We anticipate these modifications will be implemented by January 1, 1980.

* *

Recommendation 2.1.5.a - Dedicated Penetrations for External Recombiners or Post-Accident Purge Systems.

Response - ANO-1

ANO-1 has currently installed redundant, safety grade, and dedicated hydrogen purge systems. Therefore, this recommendation is satisfied by the existing design.

Response -ANO-2

ANO-2 has currently installed one safety grade, dedicated hydrogen purge system as well as redundant and safety grade in containment hydrogen recombiners. Therefore, this recommendation is satisfied by the existing design.

* *

Recommendation 2.1.5.b - Inerting BWR Containments

Response - ANO-1 and 2

ANO-1 is a B&W PWR design and ANO-2 is a CE PWR design, therefore, this recommendation is not applicable to these units.

* *

Recommendation 2.1.5.c - Capability to Install Hydrogen Recombiner at each Light Water Nuclear Power Plant.

Response - ANO-1 and 2

We are currently re-evaluating our procedures for use of hydrogen purge (ANO-1), and hydrogen purge and recombiners (ANO-2) to assess their effectiveness in view of information from TMI-2 and NUREG-0578. These procedures will be modified as appropriate and training provided on the modifications by January 1, 1980.

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Recommendation 2.1.6.a - Integrity of Systems Outside Containment likely to Contain Radioactive Materials (Engineered Safety Systems and Auxiliary Systems) for PWRs and BWRs.

Response - ANO-1 and 2

AP&L is in the process of developing a program to implement these recommendations. The program is expected to be organized as follows.

1. Define all safety and auxiliary systems outside containment which could potentially contain high radioactivity following an accident.

2. Define the accident boundaries of each of these systems.

3. Perform a visual inspection of each of these systems to identify system features which could provide leakage paths for radioactive material. (i.e. valve packings, flanges, valve bonnets, pump seals, etc.).

4. The items identified in 3 above will be reviewed to determine for testability for leakage and for potential design improvements to reduce leakage. Leakage measurement testing will be performed. In these cases where testing is impractical, an inspection program will be implemented.

5. Test procedures will be prepared to run periodic tests (i.e., at least once every 18 months) of each system for leakage and to measure leakage where practical. Results of the first test will be reported to NRC within one month of completion of the tests.

6. Our preventive maintenance program will be revised to include those items having a high potential for leakage based on our operating experience.

The methods outlined in steps 1, 2, and 3 have begun and are expected to be complete by January 1, 1980. Based on the review (step 4) a schedule will be developed and forwarded to NRC for completion of steps 5 and 6. Step 4 is expected to be completed by January 1, 1980, except for identification of potential design improvements.

As requested in your October 17, 1979 letter, we will address the North Anna Unit 1 incident, as it applies to our units, as part of our January 1, 1980 response.

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Recommendation 2.1.6.b - Design Review of Plant Shielding of Spaces for Post-Accident Operations.

Recommendation 2.1.8.a - Improved Post-Accident Sampling Capability.

Response - ANO-1 and 2

Currently we are reviewing all appropriate designs and procedures to assure the feasibility of sampling and analyzing reactor coolant and containment atmosphere under post-accident conditions. These reviews will be completed and a report describing these results and any procedural modifications necessary prior to the January 1, 1981 modifications will be forwarded to you by January 1, 1980. The identified corrective actions will be implemented by January 1, 1981, subject to equipment availability and NRC review.

* *

Recommendation 2.1.8.b - Increased Range of Radiation Monitors

Response - ANO-1 and 2

Currently ANO-2 has installed two post accident, safety grade, radiation monitors capable of indicating and recording to 107 R/hr. However, these monitors are not qualified. They have been involved in a qualification program since 1976 and have yet to meet qualification requirements. Modifications have been made and the monitors are about to begin qualification testing again. This qualification testing is currently scheduled to be completed by June 1980.

Provided this qualification testing is successful, we will provide two safety grade, qualified monitors in both ANO-1 and ANO-2, with one channel recorded in each unit. This should be provided by January 1, 1981, subject to success of the qualification program and availability of equipment.

We will install noble gas effluent monitoring equipment with an upper range of 10^5 Ci/cc (Xe-133). Monitors are to be provided for the Radwaste Area Stack, Fuel Handling Area Stack and the Reactor Building Stack on ANO-1 and for the Fuel Handling Area Vent, Radwaste Area Vent, Containment Purge and the Auxiliary Building Extension Vent on ANO-2. These monitors will be powered from a safety grade source.

We are currently evaluating designs and investigating types and availability of monitors. Vent monitors for noble gases will be installed by January 1, 1981. An interim method for quantifying high level releases will be employed prior to implementation of the January 1, 1981 modification. This interim method will consist of monitoring instrumentation for the Auxiliary Building vents. Procedures for these actions and administrative procedures for closure of the Fuel Handling Area and Containment Purge vents will be in effect by January 1, 1980.

Capability currently exists to perform spectral analysis of all iodine and particulate filters. Therefore, we currently meet the iodine recommendation.

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Recommendation 2.1.8.c - Improved In-Plant Iodine Instrumentation.

Response-ANO-1 and 2

Currently we have nine portable air samplers and procedures for obtaining and performing spectral analyses on these samples. Therefore, we currently satisfy this recommendation.

* *

Recommendation 2.1.9 - Analysis and Design of Off-Normal Transients and Accidents.

1. Small Break LOCA analysis and preparation of emergency procedure guidelines.

2. Implementation of small break LOCA emergency procedure guidelines.

3. Analysis of inadequate core cooling and preparation of emergency procedure guidelines.

4. Implementation of emergency procedures and retraining related to inadequate core cooling.

5. Analysis of accidents and transients and preparation of emergency procedure guidelines.

6. Implementation of emergency procedures and retraining related to accidents and transients.

7. Analysis of LOFT small break tests.

Response - ANO-1

1. The analyses have been performed, emergency procedure guidelines prepared, procedures modified, and training provided.

2. Emergency procedures have been modified and operator training has been provided.

3. These analyses and procedural guidelines are being prepared as our response to IE Bulletin 79-05C Item 5. Our schedule for implementation is provided in our response to Item 2.1.3.b.

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4. As needed, emergency procedures will be modified and operator training provided based on the results of Item 3 above no later than the end of the January outage.

5. We are participating in a generic B&W program to address this item. As presented to members of the NRC staff in a meeting with the B&W Owner's Group on September 13, 1979, the Abnormal Transient Operating Guidelines (ATOG) Program is an indepth and thorough effort to develop plant specific operational guidelines. These guidelines will in turn be used to develop detailed emergency procedures for a broad spectrum of abnormal transient events.

   Due to the detailed nature of the ATOG Program (i.e, use of event trees, safety sequence diagrams, and system auxiliary diagrams), as described in the September 13, 1979 meeting, ANO-1 (the lead plant) will have draft guidelines from B&W by February 22, 1980, and will have final guidelines by March 14, 1980.

6. Plant specific procedures and operator training based on the results of Item 5 above will be completed within 3 months of completion of item 5.

7. AP&L is committed to a generic B&W program to analyze the LOFT small break tests. As discussed with the staff by the B&W Owners Group in a September 13, 1979, meeting, the results of this analysis will be available by January 15, 1980. This is currently our most expedited schedule based on the scheduled workload of B&W personnel. We understand from B&W this schedule is acceptable based on rescheduling the LOFT L3-1 Test to November 24, 1979, and having provided a pre-test prediction on November 20, 1979.

Response - ANO-2

1. The analyses have been performed, generic emergency procedure guidelines prepared and submitted to NRC for review.

2. Plant specific emergency procedures will be prepared and implemented within 3 months of NRC approval of the generic guidelines in 1 above.

3. These analyses and procedural guidelines are being prepared as our response to IE Bulletin 79-06C Item 5 stated and will be provided by October 31, 1979.

4. Emergency procedures will be modified and operator training provided based on the results of Item 3 above by January 1, 1980.

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IMPLEMENTATION SCHEDULE
1979 OUTAGE

January/February 1980 Outages

2.1.1 Emergency Power Supplies to Pressurizer Heaters (Units 1 or 2) Emergency Power to PORV Block Valve (Unit 1).

2.1.3.a Safety Grade PORV (Unit 1) and Safety Valve Position Indication (Units 1&2).

2.1.3.b Margin to Saturation Meters With Nonsafety Grade Temperature Inputs. (Units 1&2).

2.1.4 Containment Isolation of ES Actuation (Units 1 & 2).

2.1.7.b Add Redundant Nonsafety Grade Trains to EFW Flow Indication (Unit 1).

2.1.7.a. Control Grade Auto Initiation of EFW (Unit 1).

May 1980 Completion

2.1.3.b Upgrade Temperature Inputs to Tsat Meters to Safety Grade (Unit 1).

December 1980 Outage

2.1.3.b RV Level Indication

2.1.6.b. Plant Shielding Improvements

2.1.7.a Safety Grade Auto. EFW Initiation

2.1.7.b. Upgrade EFW Flow Instrumentation to Safety Grade *Unit 1).

2.1.8.a Post Accident Sampling System

2.1.8.b High Range Radiation Monitors Containment Water Level Monitors Containment Hydrogen Monitors RCS Vents

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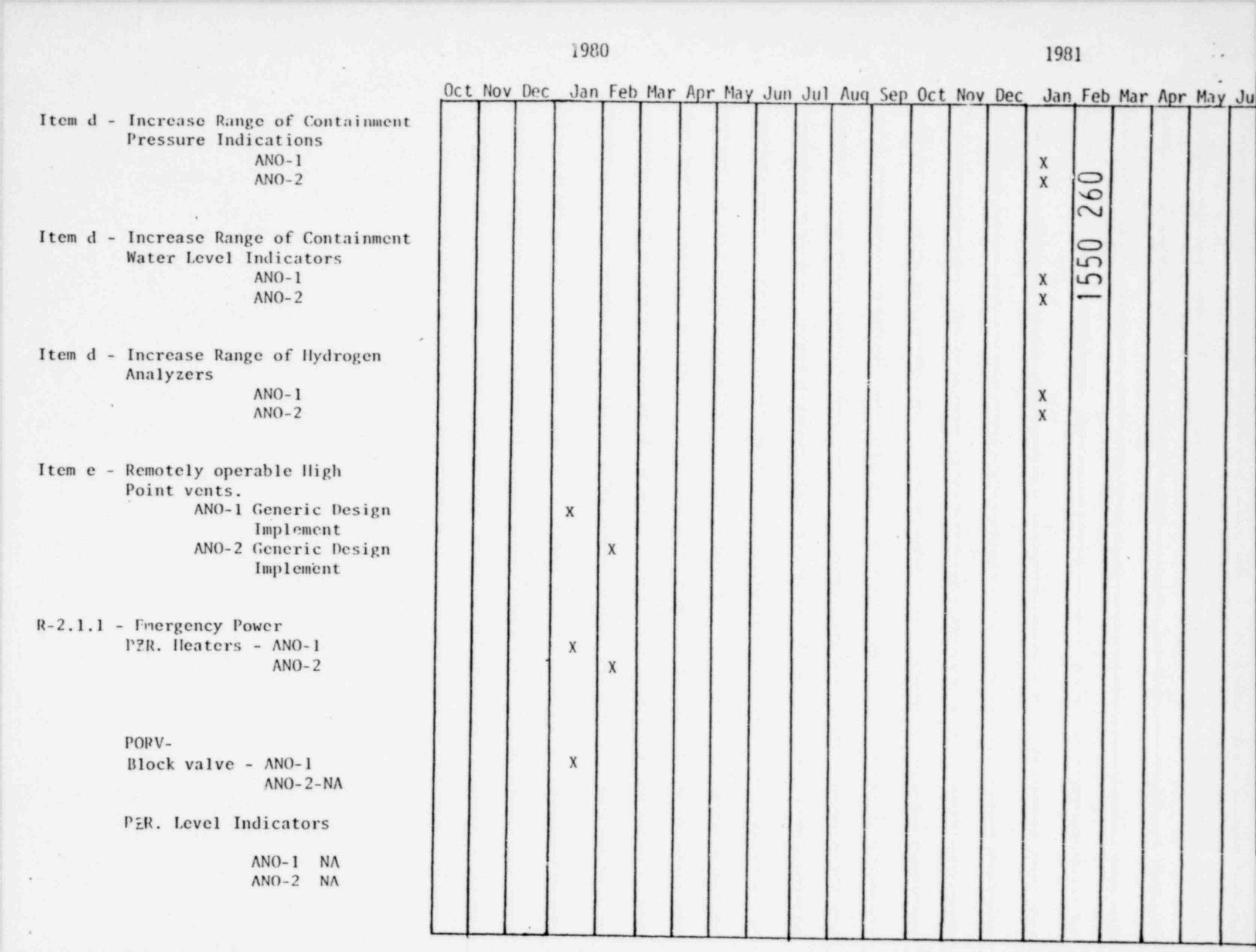
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Item d - Increase Range of Containment Pressure Indications
ANO-1
ANO-2
Item d - Increase Range of Containment Water Level Indicators
ANO-1
ANO-2
Item d - Increase Range of Hydrogen Analyzers
ANO-1
ANO-2
Item e - Remotely operable High Point vents.
ANO-1 Generic Design
Implement
ANO-2 Generic Design
Implement
R-2.1.1 - Emergency Power
PZR. Heaters - ANO-1
ANO-2
PORV-
Block valve - ANO-1
ANO-2-NA
PZR. Level Indicators
ANO-1 NA
ANO-2 NA
X
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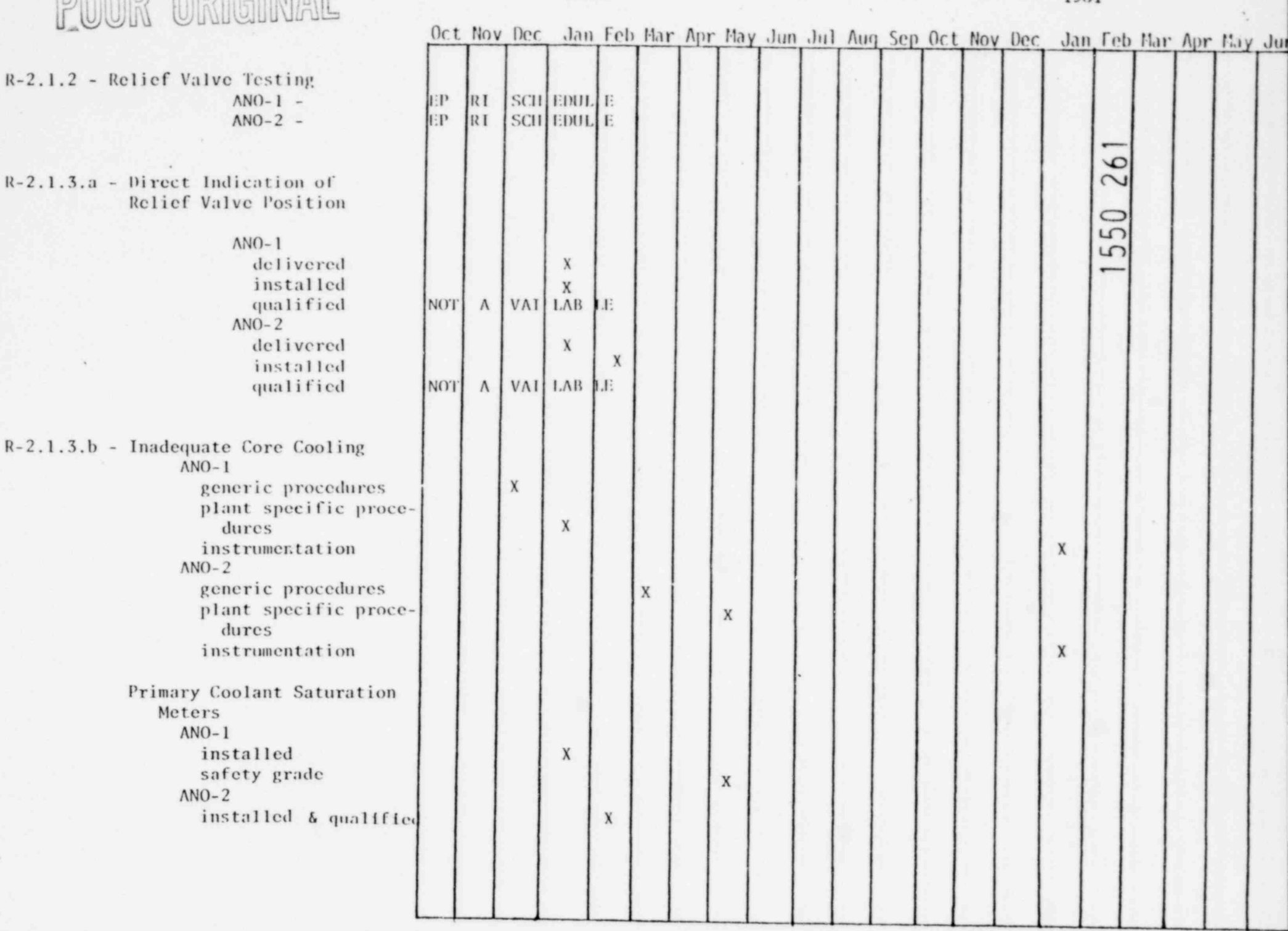

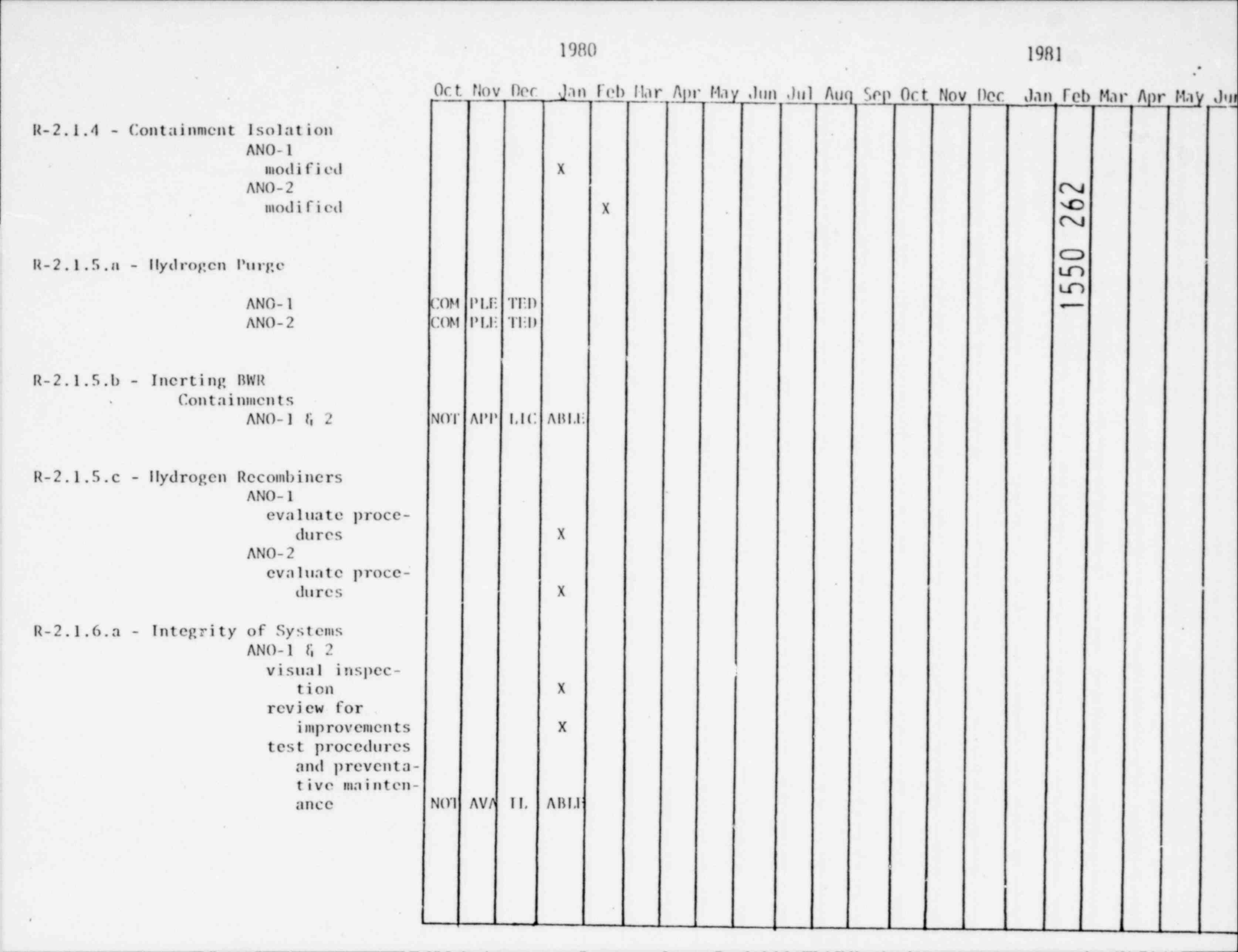
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R-2.1.4 - Containment Isolation
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ANO-2
modified
X
R-2.1.5.a - Hydrogen Purge
ANO-1
COMPLETED
ANO-2
COMPLETED
R-2.1.5.b - Inerting BWR Containments
ANO-1 & 2
NOT APPLICABLE
R-2.1.5.c - Hydrogen Recombiners
ANO-1
evaluate procedures
X
ANO-2
evaluate procedures
X
R-2.1.6.a - Integrity of Systems
ANO-1 & 2
visual inspection
X
review for improvements
X
test procedures and preventative maintenance
NOT AVAILABLE
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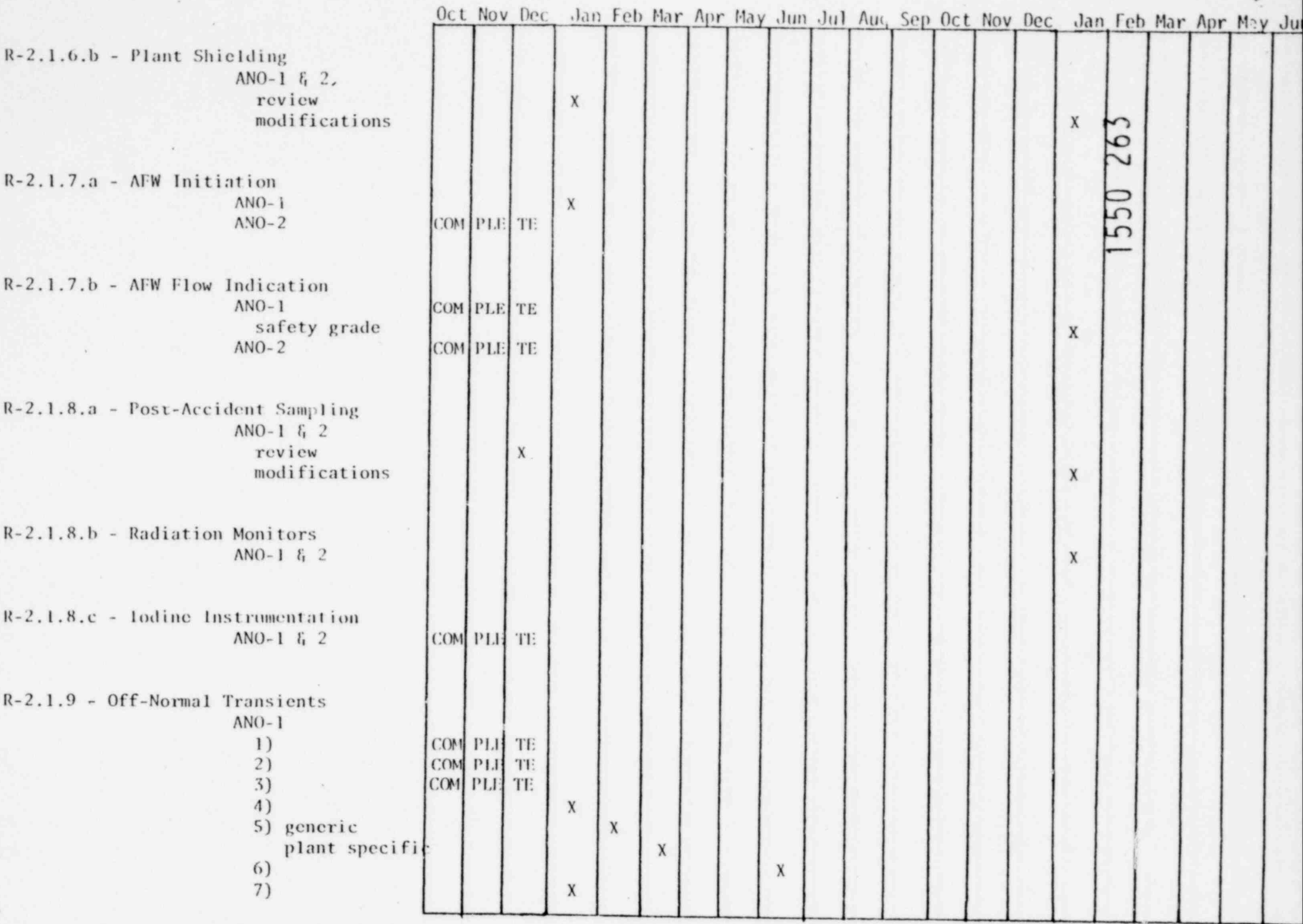
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R-2.1.6.b - Plant Shielding
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R-2.1.7.a - AFW Initiation
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R-2.1.7.b - AFW Flow Indication
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X
ANO-2
COM PLE TE
R-2.1.8.a - Post-Accident Sampling
ANO-1 & 2
review
X
modifications
X
R-2.1.8.b - Radiation Monitors
ANO-1 & 2
X
R-2.1.8.c - Iodine Instrumentation
ANO-1 & 2
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R-2.1.9 - Off-Normal Transients
ANO-1
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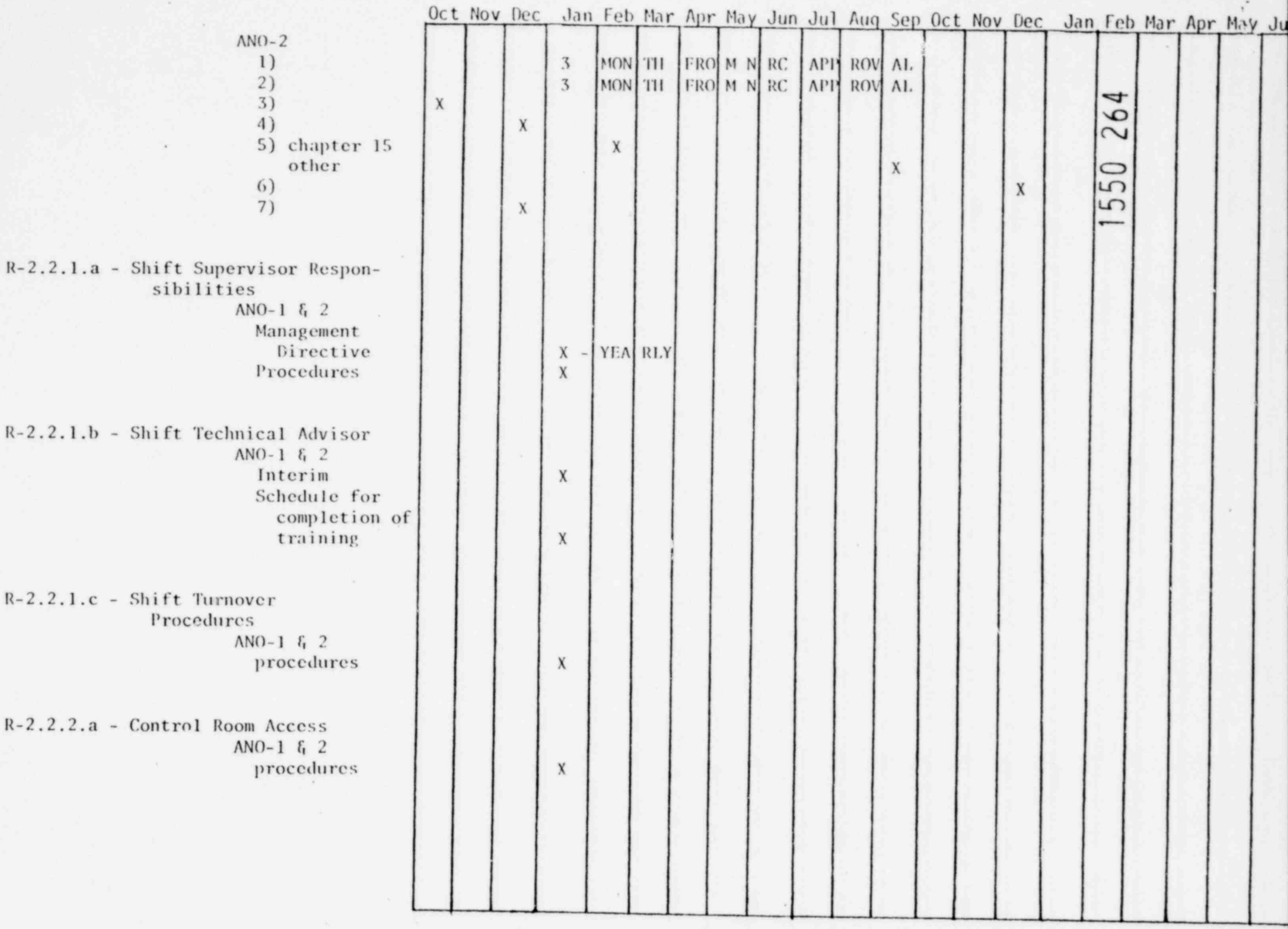
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R-2.2.1.a - Shift Supervisor Responsibilities
ANO-1 & 2
Management
Directive
Procedures
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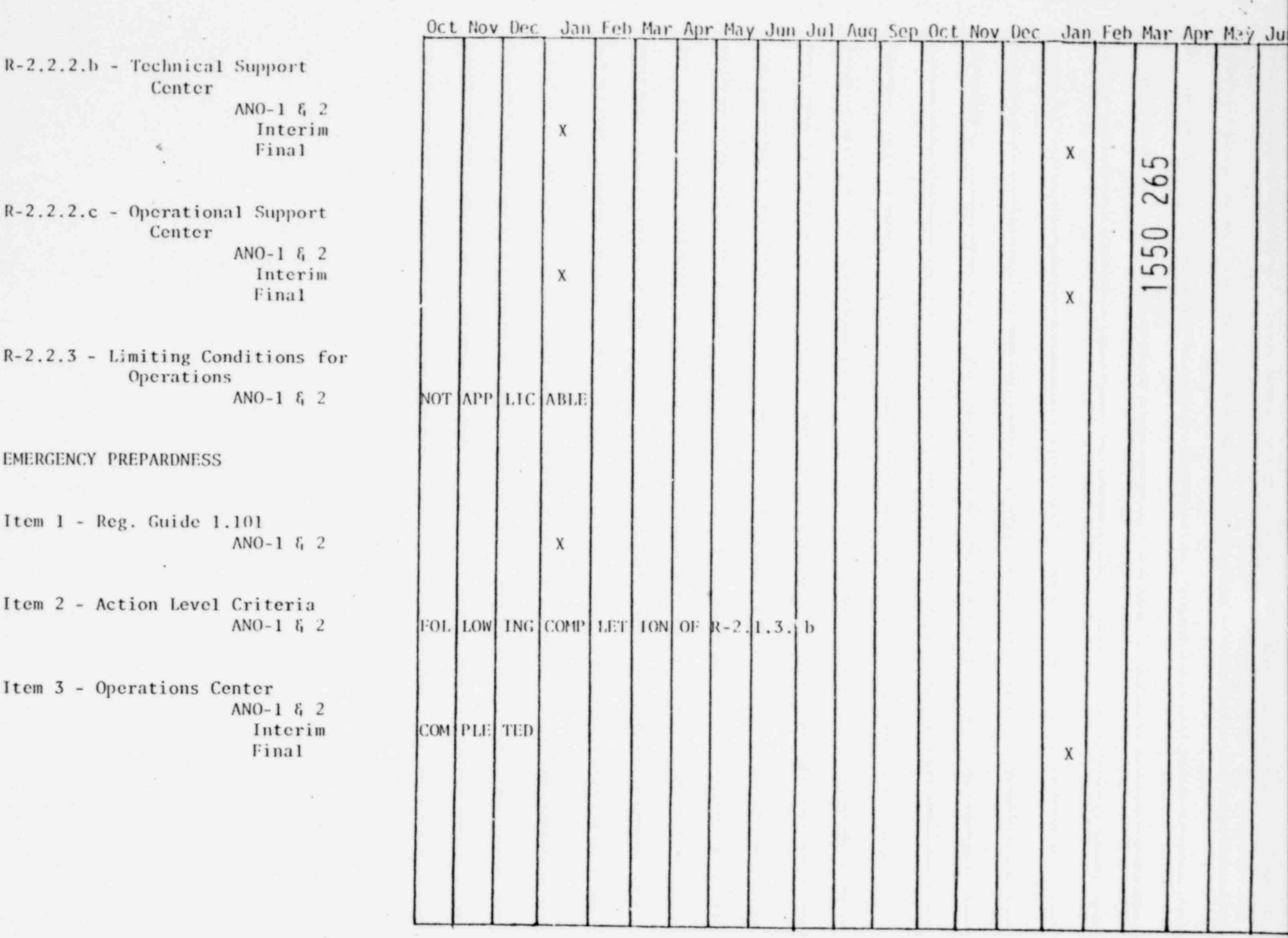
R-2.2.1.b - Shift Technical Advisor
ANO-1 & 2
Interim
Schedule for
completion of
training
X
X
R-2.2.1.c - Shift Turnover Procedures
ANO-1 & 2
procedures
X
R-2.2.2.a - Control Room Access
ANO-1 & 2
procedures
X


1980
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Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Ju
R-2.2.2.b - Technical Support Center
ANO-1 & 2
Interim
Final
X
X
R-2.2.2.c - Operational Support Center
ANO-1 & 2
Interim
Final
X
X
R-2.2.3 - Limiting Conditions for Operations
ANO-1 & 2
NOT APP LIC ABLE
EMERGENCY PREPARDNESS
Item 1 - Reg. Guide 1.101
ANO-1 & 2
X
Item 2 - Action Level Criteria
ANO-1 & 2
FOL LOW ING COMP LET ION OF R-2.1.3.b
Item 3 - Operations Center
ANO-1 & 2
Interim
Final
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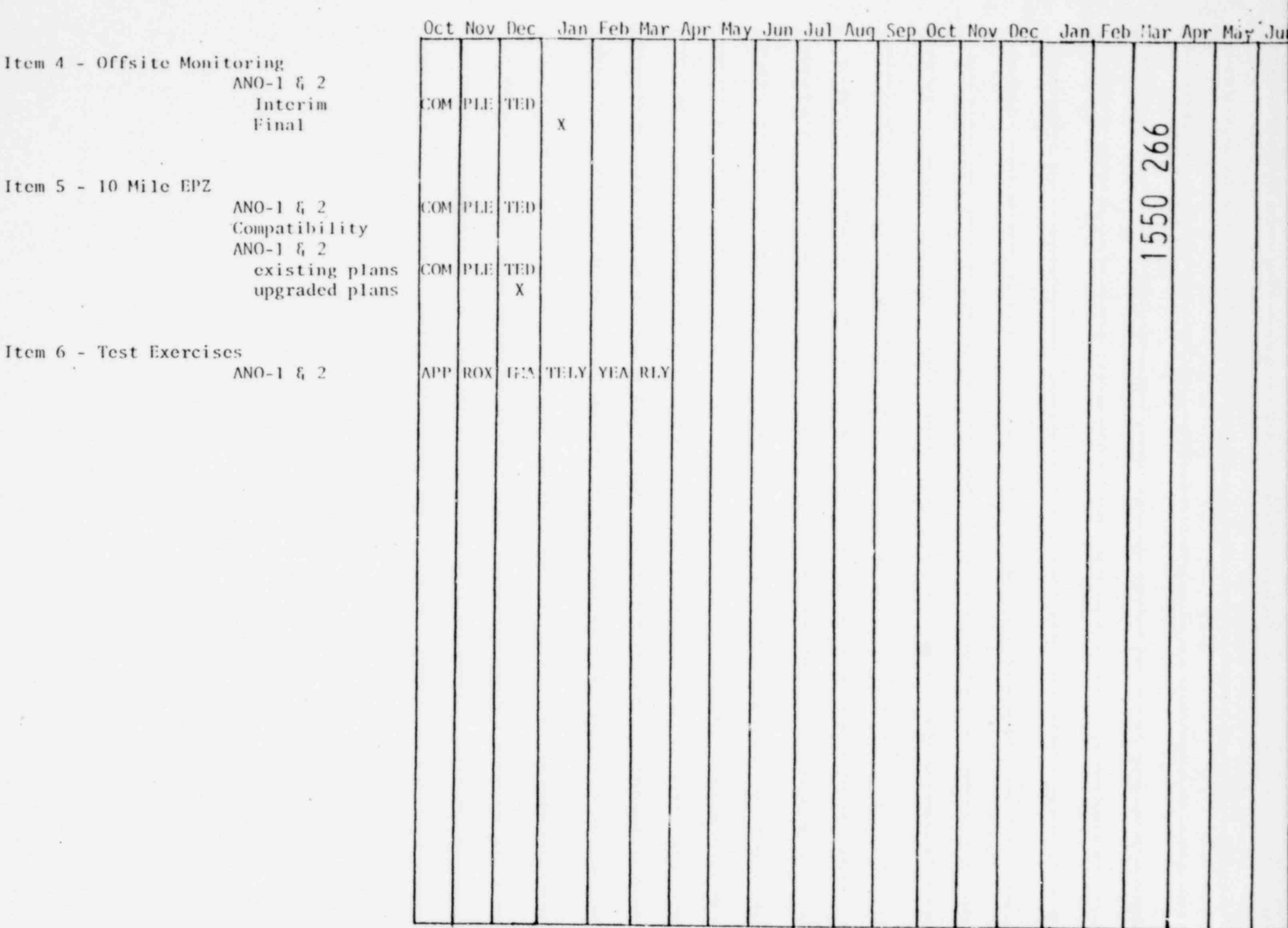
1980
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Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun
Item 4 - Offsite Monitoring
ANO-1 & 2
Interim
Final
COM PLE TED
X
Item 5 - 10 Mile EPZ
ANO-1 & 2
Compatibility
ANO-1 & 2
existing plans
upgraded plans
COM PLE TED
COM PLE TED
X
Item 6 - Test Exercises
ANO-1 & 2
APP ROX TEA TELY YEA RLY
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