ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Inspection Report: 50-361/95-17
50-362/95-17

Licenses: NPF-10
NPF-15

Licensee: Southern California Edison Co.
P.O. Box 128
San Clemente, California

Facility Name: San Onofre Nuclear Generating Station, Units 2 and 3

Inspection At: San Clemente, California

Inspection Conducted: October 10-13, 1995

Inspectors: Arthur D. McQueen, Emergency Preparedness Analyst (Team Leader)
Plant Support Branch

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Plant Support Branch

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Operations Branch

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Office of Nuclear Reactor Regulation

Approved: for Blaine Murray, Chief, Plant Support Branch — 11-9-95 Date

Inspection Summary

Areas Inspected (Units 2 and 3): Routine, announced inspection of the licensee's performance and capabilities during the full-scale exercise of the emergency plan and implementing procedures, and followup on previous inspection findings. The inspection team observed activities in the Control Room (simulator), Technical Support Center, Operations Support Center, and Emergency Operations Facility.

Results (Units 2 and 3):

- The control room staff's performance in the areas of event analysis, emergency classification, and notification of offsite authorities was excellent (Section 2.1).

- Overall, the technical support center staff's performance was good. Briefings were generally good and frequent. The radiological protection staff performed effectively (Section 3.1).

- Overall, the operations support center functioned very well during the exercise. The operations support center was quickly staffed, activated and fully functional within 18 minutes after the declaration of the Alert. It supported the technical support center by promptly providing repair and surveillance teams to help identify the nature of problems and repair failed or damaged components (Section 4.1).

- The emergency operations facility staff's performance was generally good. The facility was promptly activated, and command and control were properly maintained. Offsite agency notifications were timely; however, some inconsistent terminology was used. Protective action recommendations were satisfactory; inappropriate dose values were used in the facility. Room for improvement was observed regarding visual aids and information presentation. Habitability was properly maintained. Coordination between the dose assessment and technical teams and interactions with offsite response teams were excellent (Section 5.1).

- The exercise scenario provided sufficient challenges to test emergency response capabilities and demonstrate exercise objectives (Section 6.1).

- The licensee's critique process was identified as a strength (Section 7.1).

Summary of Inspection Findings:

- Inspection Followup Item 361/94-005-02 and 362/94-001-01 was closed (Section 8.1)

Attachments:

- Attachment 1 - Persons Contacted and Exit Meeting
- Attachment 2 - Licensee Scenario Summary and Timeline

DETAILS

1 PROGRAM AREAS INSPECTED (82301)

The licensee's emergency exercise began at 8 a.m. on October 11, 1995. The licensee activated its emergency response organization and all emergency response facilities. Offsite participation in this biennial, full participation exercise included the State of California, Orange and San Diego Counties, and NRC, Region IV. The Federal Emergency Management Agency (FEMA) evaluated the performance of State and local participants. The results of FEMA's evaluation will be documented in a separate report.

The scenario for the exercise was dynamically simulated using the San Onofre Nuclear Generating Station (SONGS), Units 2 and 3 simulator. A licensee summary of the exercise scenario including major events and a timeline is attached (Attachment 2).

2 CONTROL ROOM (82301-03.02)

The inspection team observed and evaluated the control room staff as they performed tasks in response to exercise events indicated by the control room simulator. These tasks included detection and classification of event-related conditions, detailed analysis of conditions, notification of licensee personnel, and notification of offsite authorities.

The control room staff properly detected, analyzed, and classified emergency events during the exercise. Interactions between the supervisory operator, the control room supervisor, and control operators were exemplary with regard to control of the plant and performance of procedures. Face-to-face communications were generally correct and formal. The supervisory operator addressed control operators by name when directing the execution of specific emergency operating procedure steps. The control operators repeated back the orders and provided clear oral reports to the supervisory operator when the actions were completed. The shift manager continuously monitored emergency action level flow charts and critical safety function status trees and advised the supervisory operator and control room supervisor of the current status and potential changes at regular intervals. All control operators remained alert throughout the drill and aggressively sought to keep supervision informed of plant conditions and their availability for assignment to event priorities.

The following areas of strong performance were noted::

- Command and Control and prioritization of actions by the crew's supervision were excellent.

- The control room staff properly detected, analyzed, and classified the emergency events during the exercise. All required notifications were properly made.

The following observations were provided for the licensee's consideration as potential improvement areas:

- Crew communications were adequate to good with minor instances of missed communication or failure to announce an annunciator that required operator action.

- Initial setup of the communications links between the control room communicator and the operations support center, technical support center, and emergency operations facility was slightly delayed due to head phone jack installation problems.

- During the fast shutdown due to the loss of coolant accident, the balance of plant operator over-fed the steam generators. This over-cooled the reactor coolant system and contributed to the crew misdiagnosing the existing leak rate. This contributed to the shift manager declaring a Site Area Emergency too early.

- During the recirculation actuation signal one train of the emergency core cooling systems was deenergized due to equipment failure. When the train was eventually reenergized by the crew and its recirculation actuation signal occurred, the associated refueling water storage tank suction valve was not closed by the crew for approximately one hour.

- The crew also failed to close all four high pressure safety injection valves when the pump was tripped per procedure.

Some simulator problems were noted during the exercise, which were also identified by the licensee:

- Annunciator, "Unit 2 Load Group A Lockout Override" could not be cleared.

- The high pressure safety injection pump shaft sheer event had to be reset and run twice due to simulator operator error.

- Emergency diesel generator (EDG-A) was erroneously tripped due to simulator operator error.

It should be noted that these simulator problems had minor scenario impact, but generally confused the operators and did not promote confidence in the simulator's capability to reflect actual plant conditions.

3 TECHNICAL SUPPORT CENTER (82301-03.03)

The inspection team observed and evaluated the technical support center staff as they performed the full range of tasks necessary to respond to the exercise scenario. These tasks included detection and classification of events;

notification of Federal, State, and local response agencies; analysis of plant conditions; formulation of corrective action plans; and prioritization of mitigating actions.

Technical Support Center staffing and activation were accomplished promptly and systematically. The emergency response staff started to arrive at the facility within minutes of the Alert declaration (8:08 a.m.) and immediately implemented their emergency plan procedures and checklists. The site emergency director relieved the shift supervisor of emergency response duties and activated the technical support center within about 25 minutes following the Alert declaration. A formal announcement was made when the technical support center took over command, control and emergency management from the control room. The center was staffed with a sufficient number of individuals with the appropriate expertise and emergency plan implementing procedures were adequately used. Status boards were adequately used and updated in a timely manner.

Plant conditions were analyzed and evaluated in a timely manner. During the exercise, the site emergency director classified emergency conditions and completed corresponding emergency plan requirements. Classifications were coordinated with the control room and emergency operations facility, as appropriate. The declaration of the General Emergency appeared to have been made shortly prior to actually reaching the full criteria of Emergency Action Level B4-1. The licensee also identified this very conservative declaration and was reviewing the issue. Offsite agency notifications were promptly initiated. Appropriate and conservative protective action recommendations were communicated to offsite officials. Subsequent followup notifications were made in accordance with procedures.

The site emergency director exercised good command and control in the technical support center. Noise levels and congestion were maintained at a low level. Briefings in the technical support center were generally timely, frequent, concise, and informative. Trending of significant changing plant conditions was conducted and actions were proposed, discussed and, as appropriate, taken. The site emergency director effectively used his staff in trying to control the event and prevent a degrading situation. The control room, operations support center, and the emergency operations facility were kept informed of activities being implemented by the technical support center. There were an adequate number of communicators in the technical support center.

Dose assessment in the technical support center was performed well. Dose calculations were promptly and correctly carried out. The health physics staff encountered problems with their 1 minute data being provided by the health physics computers (RADDOSE V) about an hour early. The radiation data being provided was not synchronized with data being communicated by the simulator, thus causing confusion establishing radiation levels. This was recognized by the licensee controllers, who instructed players to cease using the computer data. The controllers then began providing printed hard copy data at 15 minute intervals. The technical support center field team

coordinator maintained contact with the operations support center and the field teams and provided the dose assessment staff with information regarding environmental monitoring team sample results throughout the exercise.

The technical support center engineering staff's support to the control room was very good. Core damage assessment was conducted.

The radiological protection staff in the technical support center performed well during the exercise. Technical Support Center habitability was considered throughout the exercise with appropriate announcements about eating and drinking and proper radiation protection guidelines and practices. A radiological control point with ribbon barriers, monitoring devices, and step-off pad was established at the building entryway serving the control room and the technical support center.

4 OPERATIONS SUPPORT CENTER (82301-03.05)

The inspectors evaluated the performance of the operations support center staff as they performed tasks in response to the exercise. These tasks included facility activation, providing support to operations, and in-plant emergency response team coordination.

The operations support center is located near the health physics control point on the 70 foot level in the control building, which also houses the control room and technical support center. The operations support center consists of two rooms. One room serves normally as a lunch room and is used during drills and emergencies as a holding area for the support staff. The main room of the center is not dedicated as an operations support center; however,it was quickly converted to an operations support center. Locked storage cabinets containing equipment and supplies were located in both rooms for use in the center or by responding teams. Adequate equipment and supplies were available and installed promptly. The space was adequate for the center staff and support personnel, which helped in eliminating noisy or crowding conditions. Additional space to brief the teams was available nearby.

The operations support center was promptly staffed, declared activated, and fully functioning, 18 minutes after the Alert was declared. Command and control in the center were good. Noise and congestion were maintained at a low level. Briefings in the operations support center were generally timely, concise, frequent and informative. Upon arrival, facility personnel followed established procedural guidance to set-up the facility, and prepared to dispatch onsite response teams. The operations support center staff appeared knowledgeable of their duties and the emergency group leader effectively used the staff to obtain operations data, site conditions and status of onsite teams. Interactions between the members of the staff were very good. Generally, the status boards and team assignment board were appropriately maintained and used by the staff.

Onsite teams were formed and dispatched in response to requests from the technical support center. During the exercise, the operations support center dispatched and tracked approximately 20 teams. Team members were appropriately briefed on assigned tasks, radiological conditions, precautions, and protective measures. At times, separate briefings were conducted for craft team members and health physics technicians. To facilitate the information flow, the teams maintained good communications with the operations support center, relaying vital information about equipment and radiological levels to the center. Onsite teams communicated frequently with the operations support center through the onsite field team communicator. Radiological conditions, equipment status, and progress of repair efforts were reported back to the operations support center. Additional instructions, clarifications, and information on changing plant conditions were provided to the teams while they were in the plant. Respirator qualifications and dose histories of potential team members were determined in advance. Accomplishing these actions during the activation process saved considerable time in preparing teams for assignment dispatch. The use of potassium iodide was discussed and written forms allowing for workers to receive doses above administrative limits were also discussed. On completion of the work, the teams were debriefed. It was observed by the inspectors, however, that several inplant team dispatch checklists were not completely filled out with required data.

The personal computer based system used by the licensee to determine accountability appeared to function properly during the exercise. All operations support center personnel were required to log in on arrival at the center. A similar arrangement was used at the technical support center. When all members signed into the system, the list was compared to the records maintained by security. Access control points for the operations support center were established at two locations and step-off pads, signs and ropes were placed to control contamination.

Communications were good between the operations support center, the technical support center and the emergency operations facility. An open line was maintained between these facilities, thereby permitting all parties to simultaneously hear updates and plant conditions. Communications between the onsite teams and the operations support center were good and field results were quickly conveyed to the center management and factored into proposed repairs and future repair team assignments. The emergency group leader provided frequent briefings and updates to the operations support center staff. Separate briefings were given to the support staff (mechanics, health physics technicians, and electricians located in the adjacent lunch room). These briefings appeared to be less frequent than those provided to the operations support center lead staff. A combined briefing could improve this situation.

5 EMERGENCY OPERATIONS FACILITY (82301-03.04)

The inspectors observed the emergency operations facilities staff as they performed tasks in response to the exercise. These tasks included facility activation, development and issuance of protective action recommendations, notification of State and local response agencies, dose assessment, analysis of plant conditions, and direct interactions with offsite agency response teams.

The emergency operations facility was promptly activated after the Alert declaration (within 35 minutes of the 8:08 a.m. Alert declaration). Upon arrival, assigned emergency response personnel immediately readied the facility, obtained necessary procedures, and established communication links. The transfer of emergency coordinator duties occurred at about 9:10 a.m. The process was delayed slightly to allow the technical support center to complete the Site Area Emergency declaration. Offsite agency notifications of the Site Area Emergency were split between the technical support center and emergency operations facility; the technical support center completed the verbal notification, and the emergency operations facility completed the hardcopy notification.

Command and control in the emergency operations facility were generally good. Regular briefings were conducted to update facility personnel. Input from functional area team leaders was solicited during the briefings. General facility priorities were also discussed. The inspectors noted that the facility briefings were difficult to hear in the Offsite Dose Assessment Center. In addition to the briefings, the emergency planning coordinator made periodic public address announcements to alert facility personnel of current conditions.

Notifications to offsite response agencies were made in a timely manner and generally included appropriate information. During the exercise, a planned simulated loss of the primary communications system was prompted by controllers. Backup methods were effectively used. The inspectors noted that the Event Notification Form (non-computer generated worksheet) incorrectly referred to emergency classification levels as emergency action levels. The computer generated form was correct. Use of different terminology between the two forms could be confusing to offsite agencies. Due to the simulated failure of the Yellow Phone System, the non-computer generated form for message 5 was faxed to the offsite agencies (i.e., offsite agencies received both types of forms).

The emergency operations facility's performance in the area of protective action recommendations was satisfactory. The inspectors observed that the basis for the evacuation protective action recommendation at the General Emergency (message 4) was not consistent with the options specified in Emergency Plan Implementing Procedure S0123-VIII-10.3, "Protective Action Recommendations." The procedure provides for recommendations based on emergency class, dose, and plant conditions. Message 4 indicated that the

basis was a "precautionary evacuation." Considering the offsite agencies' familiarity with the licensee's procedural criteria, the use of categories other than those identified in the procedure could be confusing to offsite officials.

Existing status boards in the emergency operations facility were kept current during the exercise. However, room for improvement was noted regarding visual aids and presentation of information in the facility. Three examples were identified: (1) there were no status boards to track/trend radiation monitor readings (an ad hoc paper status board was prepared when the need arose); (2) assumptions for dose projection scenarios were captured on paper and taped to a pillar in the facility, making viewing awkward; and (3) utility dose assessment status boards did not display doses at locations other than the Exclusion Area Boundary.

Dose assessment activities were performed satisfactorily in the emergency operations facility. Coordination with the technical team was excellent. Numerous dose projection scenarios were developed, and corresponding offsite doses were promptly calculated via the dose assessment computer. Meteorological conditions were closely monitored. Two areas for improvement were identified in the dose assessment area. First, proper 10 CFR Part 20 dose values were not consistently used in the emergency operations facility. On some occasions, projected doses were identified in terms of whole body and thyroid doses, rather than total effective dose equivalent and thyroid committed dose equivalent. More importantly, total effective dose equivalent rate and thyroid committed dose equivalent rates were incorrectly used for comparison with established dose limits (environmental protection agency protective action guides). Second, the fact that offsite doses beyond the 10-mile emergency planning zone did not require additional protective action recommendations was not communicated to the corporate emergency director until the final briefing at about 2:30 p.m. This type of information would have been appropriate to include in earlier briefings to ensure that facility decision-makers were aware of projected offsite consequences.

Habitability of the emergency operations facility was properly considered during the exercise. Periodic surveys were made, and restrictions on eating and drinking were appropriately communicated to all facility personnel. Provisions to relocate to the alternate emergency operations facility were considered in anticipation of a loss of habitability.

Interactions with offsite officials, NRC, and other organizations were excellent. Offsite officials were given separate briefings and invited to provide input or ask questions during utility briefings. Collocation of the NRC Site Team and utility representatives appeared effective.

6 SCENARIO AND EXERCISE CONDUCT (82301)

The inspectors made observations during the exercise to assess the challenge and realism of the scenario and to evaluate the conduct of the exercise.

The inspection team determined that the scenario was sufficiently challenging to test the licensee's emergency response capabilities and demonstrate agreed upon onsite exercise objectives. Exercise control was adequately maintained by controllers following the health physics radiation data computer problem.

7 LICENSEE SELF-CRITIQUE (82301-03.13)

The inspectors observed and evaluated the licensee's post-exercise facility critiques and the formal management critique on October 12, 1995, to determine whether the process would identify and characterize weak or deficient areas in need of corrective action.

The inspectors determined that the post-exercise critiques provided good input into the formal process. The findings included strengths, weaknesses, and observations. The licensee's organization identified four weaknesses or items warranting corrective action: (1) missed verbal State notification; (2) inconsistent use of radiation dose rate terminology in the emergency operations facility, (3) incorrect information was provided to the Offsite Liaisons in the emergency operations facility, and (4) differences between the core damage assessment procedure and RADDOSE V. Most improvement items identified by the inspectors were also identified by the licensee.

8 FOLLOWUP - PLANT SUPPORT (92904)

8.1 (Closed) Inspection Followup Item (OTHER) 361/94-005-02 and 362/94-001-01 (IFS 94-001) Dissemination of Public Information in the Emergency Planning Zone

A licensing review of Emergency Plan, Revision 6.0, had identified an unresolved issue regarding annual dissemination of public information to residents within the plume emergency planning zone. The licensee subsequently revised the public information being disseminated and submitted Emergency Plan, Revision 6.2, dated September 6, 1995, to address NRC and Federal Emergency Management Agency issues. Since this submittal has been docketed as a licensing action, it is closed as an inspection followup item and will be addressed as an emergency plan change action.

ATTACHMENT 1

1 PERSONS CONTACTED

1.1 Licensee Personnel

*C. K. Anderson, Supervisor, Site Emergency Planning
*K. M. Bellis, Manager, Emergency Planning and Public Affairs
*J. M. Curran, Project Manager, Engineering and Technical Services
*R. L. Erickson, Site Representative, San Diego Gas & Electric
*M. M. Farr, Engineer, Compliance
*K. D. Fowler, Engineering Specialist, Site Emergency Planning
*G. T. Gibson, Manager, Compliance, Nuclear Regulatory Affairs
*R. Giroux, Engineer, Compliance
*E. M. Goldin, Supervisor, Health Physics & Environment, Nuclear Regulatory Affairs
*R. Krieger, Vice President, Nuclear Generation
*J. Madigan, Acting Manager, Health Physics
*W. C. Marsh, Manager Nuclear Regulatory Affairs
*C. C. Meddings, Engineer, Site Emergency Planning
*M. Morgan, Engineer, Site Emergency Planning
*G. D. Mueller, Engineer, Quality Assurance
*L. M. Phelps, Corporate Communications Team Leader
*M. J. Phipps, Facility Coordinator, Nuclear Training Division
*J. T. Reilly, Manager, Nuclear Engineering, Construction and Fuel Services
*M. P. Short, Manager, Site Technical Support
*D. L. Richards, Engineer, Site Emergency Planning
*R. M. Rosenblum, Vice President, Engineering and Technical Support
*D. Seever, Engineer, Site Emergency Planning
*S. Sewell, Engineer, Health Physics
*M. L. Tarango, Engineer, Site Emergency Planning
*S. Wood, Consultant, Associated Technical Training Services, Incorporated
*W. G. Zintl, Manager, Manager, Site Emergency Preparedness

1.2 NRC Personnel

*J. Sloan, Senior Resident Inspector

*Denotes those present at the exit meeting

2 EXIT MEETING

An exit meeting was conducted on October 13, 1995. During this meeting, the inspectors reviewed the scope and findings of the report. The licensee did not identify as proprietary any of the materials provided to, or reviewed by, the inspection team during the inspection.

ATTACHMENT 2

SUMMARY

INITIAL CONDITIONS

The exercise began with Units 2 and 3 operating at full power. Swing HPSI pump 2P018 was out of service to investigate the cause of high vibration.

RCS LEAK

At t=0800 a 70 gpm RCS leak to containment began. Containment pressure, temperature, radiation, and sump level increased. The operators commenced a rapid shutdown in accordance with SO23-13-14, "RCS Leakage". When power level had been reduced to about 35%, the operators manually tripped the reactor.

The Shift Superintendent declared an ALERT IAW event code B2-1 at t=0808. Initial notifications were completed to the NRC at 0811, to the state OES at t=0813, and to local agencies at t=0816. No Protective Action Recommendation (PAR) was required.

Emergency recall was initiated at t=0811. The OSC was activated at t=0825. The TSC was activated at t=0833. Emergency Coordinator duties were turned over from the Shift Superintendent to the SED at t=0833. The EOF was activated at t=0843. Emergency Coordinator duties were turned over from the SED to the CED at t=0910. The Headquarters Support Center was activated at 0900. The Emergency News Center was activated at t=0915. Local and state authorities also activated their Emergency Operations Centers.

RCS LEAKAGE INCREASES

At t=0945, the RCS leakrate increased to about 4,000 gpm. The operators manually initiated a Safety Injection Actuation Signal (SIAS), a Containment Cooling Actuation Signal (CCAS), and a Containment Isolation Actuation Signal (CIAS) at t=0946. A Containment Spray Actuation Signal (CSAS) was manually initiated at t=0949 due to increasing containment pressure.

When Train B LPSI pump 2P016 was started by the SIAS, the motor failed and the breaker tripped. Smoke in the room activated a smoke detector, and the fire department responded to the scene.

The SED declared a Site Area Emergency IAW EAL B3-1. The PAR made by SCE was to evacuate the state beaches adjacent to the plant.

At t=1034, a Recirculation Actuation Signal (RAS) was automatically initiated when RWST level reached the low level setpoint. The safety injection and containment spray pumps then recirculated spilled reactor coolant from the containment emergency sump back to the reactor coolant system and the containment spray system. Dose rates near these pumps and connecting piping in the penetration building and safety equipment building increased significantly.

LOSS OF 4 KV BUS 2A04

At t=1030, the breaker for containment spray pump 2P012 developed an internal phase to phase fault, failed to open, causing the bus source breaker to trip open, deenergizing 1E 4kV bus 2A04. This results in a loss of all train A AC powered equipment, including HPSI pump 2P017, LPSI pump 2P015, and charging pumps 2P190 and 2P191. An operator was dispatched to transfer the swing charging pump 2P191 to train B. The transfer switch had failed and it was impossible to complete the transfer. At t=1045, the RCS leakrate increased to about 10,000 gpm. At t=1050, the last charging pump 2P192 tripped due to a broken connecting rod. This left only HPSI pump 2P019 injecting makeup to the RCS. At t=1100, the SED declared a General Emergency IAW EAL B4-1.

SUMMARY(continued)

FAILURE OF HPSI PUMP 2P019 AND CORE UNCOVERY

At t=1110, the pump inboard bearing on HPSI pump 2P019 seized, and the motor breaker tripped. This resulted in a complete loss of all makeup to the RCS and lowering core water level. Maintenance was requested to expedite efforts to restore bus 2A04, and HPSI 2P018. The control room operators attempted to remotely align the remaining Containment Spray Pump 2P013 to inject water into the RCS via the LPSI header. When the operators attempted to align the breaker for 2HV8151, Containment Spray to LPSI cross tie valve downstream of the SDC heat exchanger, the breaker would not close and the manual handwheel would not engage.

At about t=1120, the top of the core became uncovered, and overheating of the cladding occurred. Core exit temperatures reached 1228 °F. By about t=1125, sufficient fuel cladding failure had occurred to release 20% of the total clad gap inventory to the RCS and to the containment. Containment radiation monitors 2RE7820-1 and -2 began to steadily increase.

RESTORATION OF 4KV BUS 2A04

At t=1124 the control room operators received the report that bus 2A04 was ready to return to service. The bus was energized at t=1129. HPSI pump 2P017 started, re-establishing makeup flow to the reactor. Core exit temperatures dropped to about 250 °F. As makeup flow spills to containment through the RCS break, containment radiation increased to about 3250 r/hr.

At t=1208, HPSI 2P018 was returned to service. With two HPSI pumps running, reactor water level slowly returned to the indicating range and subcooling was restored.

INTERRUPTION OF CONTAINMENT SPRAY FLOW

At t=1145, the motor of the operating containment spray pump 2P013 short circuited, and the motor breaker tripped. Containment spray was restored at t=1220, when a repair team will be successful in racking a substitute breaker into cubicle 2A0403 for containment spray pump 2P012. This 35-minute interruption in containment spray occured as fuel clad gap activity was being introduced into the containment by the re-established HPSI flow. The interruption of containment spray flow resuled in a higher iodine concentration in the containment atmosphere than would occur with continuous spray flow.

FAILURE OF CONTAINMENT

At t=1200, a contact in the control circuitry for hydrogen purge supply inside containment isolation valve 2HV9946 short circuited, causing the valve to cycle several times and then trip. Movement stopped with the valve in the open position.

The hydrogen purge outside containment isolation valve 2HCV9945 butterfly disc was loose on the valve stem and was not seated properly. This provided a flowpath for radioactive material to escape containment via a ripped expansion bellows at the outlet of the hydrogen purge supply unit 2A080. Radiation Monitors 2(3)RE7865 and 2/3RE7808 trended upward and alarmed. An assessment teaam was dispatched and located the leaking bellows in penetration building room 213.

Dose projections at the Exclusion Area Boundary should be about 4.5 rem TEDE, and may range from 80 to 130 rem Thyroid CDE for the period t=1230 to t=1330. Edison's PAR should be to evacuate the public from the 10 mile Emergency Planning Zone.

Edited 1:02 pm October 12, 1995 950405

SUMMARY(continued)

RESPONSE TO HIGH RADIATION AREA AND TERMINATION OF RELEASE

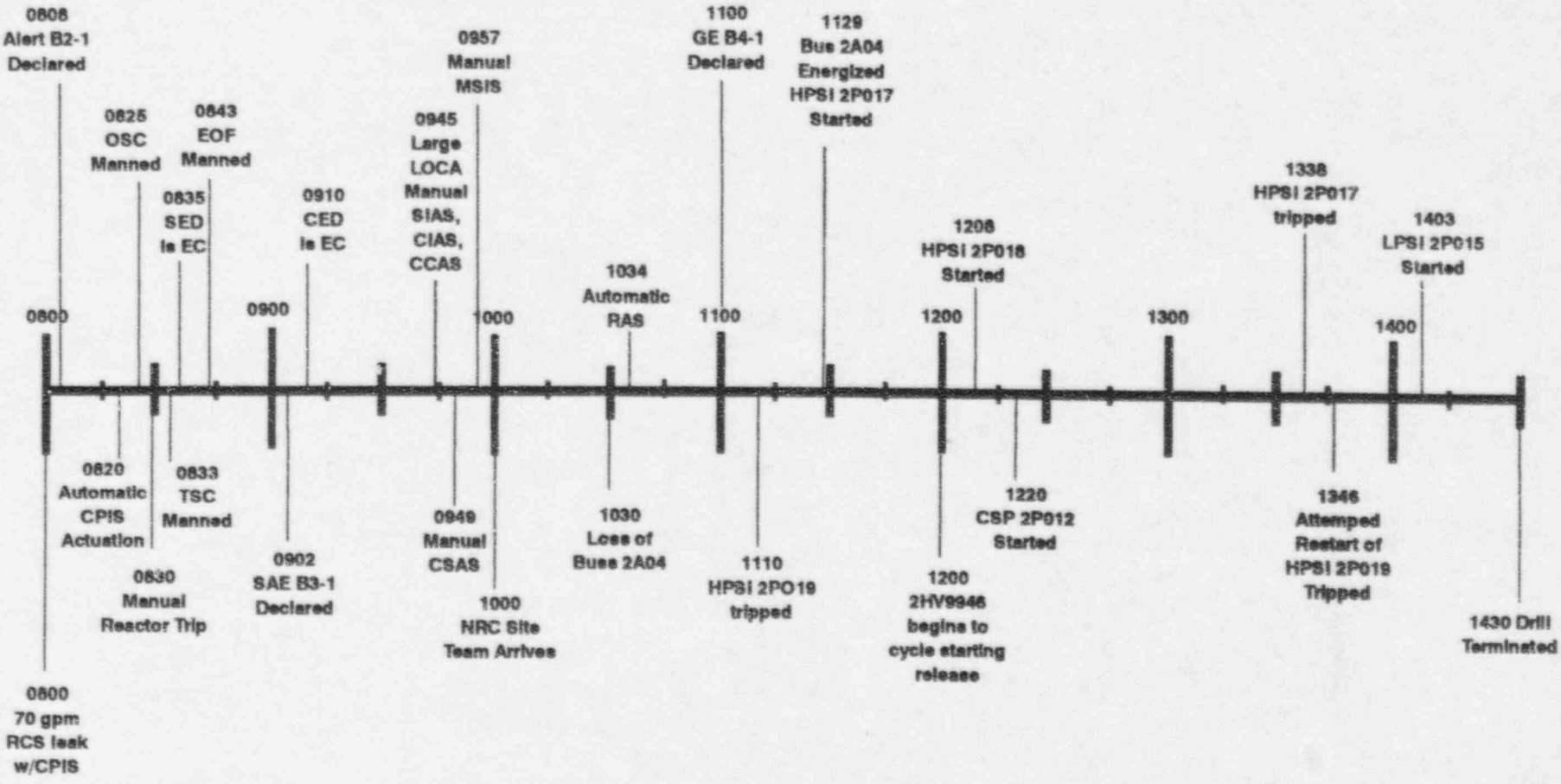
A team was formed to stop the release. The dose rate near the hydrogen purge supply unit will reach 109 rem/hr. The effort required planning and coordination for response to a high radiation area, including emergency exposure authorization by the SED.

In parallel with this effort, a team of electricians were be dispatched to attempt to close the inside containment isolation valve 2HV9946 electrically by routing power to the actuator motor. This was accomplished at motor control center breaker 2BJ31 in the train B 1E switchgear room on elevation 50 ft. This effort succeeded at t=1420.

EXERCISE TERMINATION

The exercise will be terminated when all objectives have been evaluated. This will occur at about t=1430, after coordination with controllers at all Emergency Response Facilities. Upon termination, debriefings will be conducted at each facility.

9504 TIMELINE



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