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REGION V ICF

August 23, 1984
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U.S. Nuclear Regulatory Commission
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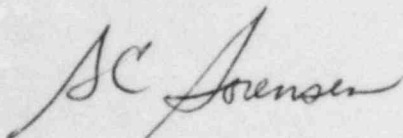
Subject: NUCLEAR PLANT NO. 2
LICENSE NO. NPF-21
NRC INSPECTION 84-15
MAY 29 - JUNE 8, 1984

The Washington Public Power Supply System hereby replies to the observations contained in your letter dated July 24, 1984. Our reply, pursuant to your request, consists of this letter and Appendix A (attached).

Items covered by this inspection report have been discussed with operating shift personnel. In addition this response will be included as required reading for all operating shift personnel.

A uniform concern throughout these observations is the involvement of plant and corporate management in the operation of WNP-2. The Supply System is acutely aware of this concern and firmly believes that we have all levels of management appropriately involved with plant operation. We have in the past, and will continue to emphasize our management involvement in the operation of WNP-2.

In Appendix A an explanation of the observation is presented along with the Supply System's response.



G. C. Sorensen
Manager, Regulatory Programs

GCS:RW:mm
Attachment

APPENDIX A

OBSERVATION: Information Turnover/Exchange

The turnover of information regarding the status of systems, equipment and operational activities during shift changes was observed on a routine basis. Individual one-to-one turnover by shift managers and the control operators is administratively controlled by administrative procedure - PPM 1.3.6 "Shift Turnover". This procedure requires oncoming and off-going control room personnel to walk-down control boards/consoles to verify checklist items and exchange other pertinent information.

The inspectors observed that, between the operating crews, there was inconsistency in the implementation of walk-down and checklist turnovers at the shift manager, control room operator and auxiliary operator levels. On several occasions, during this period, shift turnovers were completed entirely at a desk.

Besides the need for increased adherence to and more complete implementation of the shift turnover requirements, the team noted, that during turnovers, the large numbers of personnel in the control area, during the day and swing shift turnover, precipitated a noisy and distracting atmosphere for the control operators.

RESPONSE:

The observation was correct that some shift turnover inconsistency existed between crews. This was addressed with all operating crews prior to termination of the NRC inspection and specific walkdown requirements addressed. Our performance in this area has improved.

At this time we wish to clarify turnover requirements with regard to control room board/console walkdowns. Shift Managers are required to perform the walkdown after shift change (see Attachment I to PPM 1.3.6). This does not preclude walking down certain panels prior to, or during, shift change. However, this would be at the Shift Manager's discretion and the turnover could be entirely at the desk. The requirement is to walkdown the control room panels after shift turnover. Control Room Supervisors and Control Room Operators are required to perform the panel walkdown during shift turnover (Attachment II and III to PPM 1.3.6). Auxiliary Operators are not required to perform control room walkdowns or complete a checklist.

In response to the concern for control room distractions, plant management has taken several actions. On June 8 a letter was issued directing all personnel to limit non-essential activity in the control room. In addition we have created a "quiet time" period during the shift turnover. Plant supervisors have been instructed to keep unnecessary personnel out of the control room during these periods.

We believe that the actions outlined above have corrected the described situations. However, both items will be monitored on a continuing basis to determine if added improvement is required.

OBSERVATION: Limiting Conditions of Operation (LCO's) and Technical Specification Compliance

The team observed appropriate staffing levels and adherence to technical specifications applicable to plants mode.

An inspector observed that, during a shift turnover (11 a.m.), the off-going shift manager did not identify to his relief that a limiting condition of operation (LCO) existed because the reactor building ventilation system was not maintaining a 0.25 inch H₂O vacuum. The LCO existed because the reactor building supply fans were both out of service (as of 9:05 a.m.). The inspector informed the oncoming shift manager (12:00 p.m.) that the secondary containment pressure was at 0 and that he believed the plant was in an action statement, (tech spec 3.6.5.1-a. restore secondary containment integrity within 4 hours or be in at least hot shutdown within the next 12 hours. . . .).

The shift manager placed the standby gas treatment system into operation, (both trains were required because of equipment configurations) to maintain secondary containment integrity (0.25 inch H₂O vacuum).

RESPONSE:

The technical specification in question contained references to both pressure and vacuum and was misinterpreted as to what the requirement was. Since the Shift Manager's interpretation was that a Limiting Condition of Operation (LCO) had not been reached, there was no need to pass on this information to the next crew. We have clarified this technical specification with all operating crews and plan to submit a technical specification clarification to eliminate possible future confusion over this issue.

The concern noted here was that the oncoming supervisor was not informed of this condition. Entries in the Shift Manager's Log are required for events of this nature. The turnover checklist also specifies a review of LCO conditions. This ensures that necessary information is passed on to the next crew. The Shift Managers have been reinforced of the significance of this and our observation is that we have been adhering to this practice.

OBSERVATION: Awareness of Plant/System Status

Operator response to alarms appeared casual in many instances, very seldom were operators observed referencing the alarm response procedures. An inspector questioned the shift supervisor as to the reason that a fire alarm on the turbine deck was sealed in (there was no information tag on the alarm). The shift supervisor responded that there was something wrong with the system. The shift supervisor pursued the matter and later that day (approximately 7 hours) the alarm cleared when the system engineer cleaned the ionization detector.

An operator was questioned as to the reason for the LPCS pump discharge pressure high/low alarm, (alarms at greater than 450 psig or less than 40 psig). The operator said alarm must be low because pump was not running. The alarm response procedure says: 1. verify pressure ≥ 450 and ≤ 40 as read on LPCS-PI-57 on P612 and 3. if low, verify water leg pump is running and fill and vent system per PPM 2.4.3. Low pressure core spray. Pressure gauge LPCS-PI-57 does not exist in the control room on panel PG12. No procedure deviation form had been originated to correct the procedure. The inspector checked the pressure on the instrument rack E21-R002 (LPCS-PI-2) read 90 lbs and E21-R001 (LPCS-PI-1) read 80 lbs. The operator generated a maintenance work request based on the inspector's observations.

A team member questioned the shift supervisor as to the reason for the RCIC suction pressure high alarm. The supervisor responded that it was a result of water trapped in the suction lines expanding. The inspector noted that the control room panel RCIC suction pressure gauge was off scale high. This gauge only reads to 85 psig while the alarm comes in at ≥ 91 psig. The shift supervisor originated a problem report.

The lack of awareness of plant status annunciators was considered to be a weakness in plant operations.

RESPONSE:

Although operator response may have appeared casual, we believe this to be a misinterpretation of the situation. The operator's knowledge of system configurations, problems, past occurrences and the system's ability to function as designed, leads to responses that could appear casual at first appearance. Operators do not always routinely reference the alarm response procedures. If the procedure had been previously used, the operator would not have to reference the procedure every time an alarm came in. During the course of plant life it would be expected that response to the more common alarms become routine and not require reference to the alarm response procedures. Administrative procedures (PPM 1.2.3) allow the performance of "routine" procedures without referencing the written procedures.

In the specific case of the turbine deck fire alarm, an operator had been immediately sent to determine if there was indeed a fire, smoke in the area or water running. Since no evidence of fire was found, an MWR was written to initiate repairs. The Shift Manager would not specifically know what the problem was until either the Instrument and Control Technician or System Engineer reported back.

The LPCS pump discharge pressure high/low alarm will alarm at pressure ≥ 442 psig and is an indication of primary system leakage through the system isolation valves alerting the operator to possible system over-pressurization. The low alarm comes in at pressures below 64 psig. A procedure deviation has been implemented to correct the gauge identification and setpoint information (high alarm ≥ 442 psig, low alarm ≤ 64 psig).

The RCIC suction pressure high alarm normally alarms due to the water leg pump discharging into the RCIC pump suction line. A Plant Modification Request (PMR) has been initiated to evaluate the alarm setpoint requirements and gauge range.

The need to follow up on alarm situations and to initiate plant problem reports where equipment usage and/or indication is not consistent with plant operations has been reemphasized to all plant operators. The need for a review of plant safety related annunciator procedures is being evaluated at this time. Appropriate action will be taken based on results of this evaluation. In the meantime operators have been advised to initiate procedure deviations when procedural errors are discovered.

OBSERVATION: Adherence to Procedures and Controls

The inspectors reviewed select procedures. This review included: operating, alarm response, surveillance and administrative procedures. The licensed operators were observed using these procedures during startup, paralleling the generator to the grid, controlled shutdown, control room surveillance observations and tests, and reactor trip recovery.

On June 1, the inspectors, during an operability check of the No. 2 diesel generator, found that the emergency bypass switch (bypasses minor diesel trip inputs during ESF actuation) was in the off position during standby instead of on as required by its line-up procedure (PPM 2.7.2.5B) and surveillance procedure (PPM 7.4.8.1.1.2.11). It appears that independent verification has not been fully implemented.

On June 5, the inspectors observed, that for a brief period, there were no operators "at the controls" as required in plant administrative procedure PPM 1.3.2 Shift Compliment and Functions. PPM 1.3.2 part 5A states: "At least one licensed operator shall be "at the controls in the control room when fuel is in the reactor." "At the controls" is defined and outlined, as a sketch, in Attachment I to PPM 1.3.2. The team did note, during this period, that the shift supervisor was with the shift manager in his office. The administrative procedure sketch of "at the controls" differs from the FSAR in that the FSAR includes the shift manager's office while the PPM excludes the shift manager's office. The regulatory position (Regulatory Guide 1.114 - Guidance On Being Operator At The Controls Of A Nuclear Power Plant) is that: "The operator at the controls should not under any circumstances leave the surveillance area defined by Regulatory Position 3 for any nonemergency reason without a qualified relief at the controls." Regulatory position 3 (see Reg. Guide) states: "Administrative procedures should be established to define the outline (preferably with sketches) specific areas within the control room where the operator at the controls should remain. The Supply System has committed to this position during the operational phase (FSAR Appendix C.3). The failure to comply with the licensee's own procedures, even though more restrictive than the FSAR, is considered a weakness in adherence to management control.

RESPONSE:

Upon investigation of this concern, it was noted that the position of the diesel generator bypass was not left in the position specified by procedure. The diesel generator was indeed lined up with the emergency bypass switch in the off position. However, this in no way compromised the system response during accident conditions since contacts of relay K15A open during an accident to bypass unwanted trips regardless of the emergency bypass switch position.

Implementation of our Independent Verification Program is described in our response to NUREG 0737. Specifically, return to normal status at the completion of a surveillance test which requires signature acknowledgment for each step does not require independent verification. In this case when the diesel generator #2 was realigned to standby per PPM 7.4.8.1.1.2.11, independent verification was not required.

As a result of investigating this concern, PPM 2.7.2.5.8 and 7.4.8.1.1.2.11 were both changed to specify the emergency bypass switch be left in the off position.

On June 5, there was a Control Room Operator, sitting at the Shift Technical Advisor's desk, who was apparently not observed by the NRC inspector. This was within the outlined boundary of PPM 1.3.2. Subsequent to this inspection PPM 1.3.2 was revised to eliminate further questions on this issue. Plant management has observed that control room personnel have been extremely conscientious regarding adherence to this procedure. We believe the issue of "at the controls" has been appropriately addressed and adhered to. This will continue to receive management and supervisory attention.

OBSERVATION: Management Involvement

The shift managers were observed to be actively involved and knowledgeable of events and activities occurring during their respective shifts. Operations department supervisors were observed reviewing surveillances, maintenance and shift manager's logs. Upper level site management was briefed on the activities and events of the previous swing and mid-shifts at the plan-of-the-day meetings every week day morning. Upper level managers were seldom observed in the control room and only on the day shift and not during off-hours and weekends. Senior corporate management and their managers were not observed in the control room during the inspection period. Involvement by upper level management appeared to be primarily limited to written instructions and telephone conversations.

RESPONSE:

Several plant management personnel made tours through the plant and control room areas during this inspection period. On July 18, 1984, the Nuclear Safety Assurance Group presented the Plant Operations Committee with information indicating improved plant management visibility in the control room. In addition, plant and corporate management periodically tour the facility, including the control room. This occurs on weekends as well as on other than normal day shift working hours.

During the NRC inspection, corporate management had decided that plant evolutions were of such a nature to warrant limiting personnel in the control room. A conscious decision had been made during this period to minimize corporate presence in the control room.

We do not consider the observation "Involvement by upper level management appeared to be primarily limited to written instructions and telephone conversations" accurate. Corporate and senior management not only communicate by telephone and written instructions, but by random visits, participation in staff and plan of day meetings and direct one on one meetings with plant management and supervision. Further, as a specific topic at his staff meetings, the Managing Director has encouraged corporate visitation to the plant. We do not at this time feel a need to change our management approach but do see a need to become more visible in our visitations.

OBSERVATION: Log Entries

The inspectors observed that some shift details and events were not being routinely recorded in either the control operators or shift manager's logs. The following are examples of items that need to be recorded.

On May 31 the inspectors could not determine, from the logs or operations crew, at what time rod movement ended during ascension to a steady state power of 20%. Steady state power was estimated, by the operations crew, to have been achieved about three hours earlier. The process computer was of no assistance since its clock was off from 1 to 3 hours and not a reliable source of information.

On June 2, during a walkdown of the control room panels, the inspector discovered that the chart recorder R-622 power was off (detects valve steam leakage for the RCIC room and reactor water cleanup rooms no. 2, 3 and 4). This recorder provides alarms on the main control room panel when pre-set limits are exceeded and as such, with power off, its record, trends and warning function were lost.

As previously discussed, incorrect position of the diesel trip bypass switch and recorder (R-622) turned off, were not entered in the logs. The team expressed the concern that without a complete account of activities and problems, management cannot obtain an accurate picture of operations towards which corrective actions and resources can be directed. This has added importance since management's time in the plant is limited.

RESPONSE:

PPM 1.3.4 gives direction for maintaining the Shift Manager's and Control Room Log Books. The items mentioned above are not mandatory for inclusion in the Shift Manager's Log. Significant power level changes are recorded in the Control Room Log and reaching a steady state power level would typically be logged. The last two items should have been logged when the information first became available.

The concern over log keeping is a difficult assessment for any utility and is typically an ongoing program. We had previously identified the need to evaluate this area and have reviewed our log keeping procedures against the INPO Good Practice No. OP-205. A procedure revision has been prepared to implement recommendations resulting from this review. It should be noted that management can and does receive information from a variety of sources in order to remain cognizant of plant operation. The control room logs are one of the many sources utilized by all levels of management to keep informed of plant status and problems.

OBSERVATION: Work Practices

Besides providing a base to evaluate increasing proficiency and performance standards, the team used this inspection to reinforce and convey to management, those concepts that are consistent with and necessary for reliable and safe plant operation. The team believes that their observations accurately reflect activities on a day to day basis.

The team expressed the concerns that some work practices were not consistent with reliable and prudent operation. The team observed:

- o On two instances, that operators either stood on or knelt on the main control panel (by the turbine controls) to access the alarm cards for the main annunciator windows.
- o Operations with constant alarms and off-scale indications for extended periods.
- o A control operator not "at the controls" (as defined by Plant Administrative Procedure 1.3.2).
- o During entry and exit of the main condenser, for tube leak inspections by control room operations personnel, radiation work permit (RWP) requirements were not fully adhered to. While the contamination levels were extremely low, these operations personnel were not setting a correct example or exhibiting an appropriate level of caution for less experienced workers.
- o Administrative Procedure 1.3.7 - "Maintenance Work Request" requires the use of tags, (called problem ID, MWR ID on identification tags - depending on where you read), on equipment for which a maintenance work request (MWR) has been written, to preclude issuing a duplicate MWR for the same problem. These tags were also observed being used for out-of-service and out-of-commission. Some rudimentary equipment (such as radiation monitor TSC RE-2) had no information tags.
- o Information tags on the alarm and control panels were obscuring some operational information (lights and switch positions). Sometimes information on these tags was out dated - one instrument information tag said information was not reliable enough, on checking further, the equipment had been repaired. Some alarms/indications (long duration) did not have information, MWR, or problem status tags.

RESPONSE:

- o Operators have been instructed not to stand on control room panels and a step platform device is being built for future use.
- o It should be noted here that plant status plays an important role in the number of alarms present at a particular time. Our observation has been that very few alarms are locked in during power operations. This is an ongoing item and receives constant plant management attention.

MWR's are written for malfunctioning equipment. Plant Problem Reports will be written for equipment whose application is not consistent with system operating parameters. By following these guidelines we intend to further reduce the number of existing locked in alarms.

- o Control Room Operators not "at the controls" has been previously discussed.
- o Operations personnel were not making main condenser entries under the RWP in effect for condenser cleanup activities. The entry was made for inspection purposes and was authorized by the general RWP in effect for operations personnel, as controlled by local health physics requirements.
- o The use of MWR ID tags is optional as indicated by the MWR's yes/no blocks showing whether an ID tag was hung. The tags may also be used to indicate equipment that is out of service.
- o Caution tags are supplied in a variety of sizes to minimize interference with control panel visibility. The MWR ID tags are cut or modified to also minimize their effect.

Shift personnel review these tags as part of their daily routine and shall be alerted to the need for insuring the accuracy of the data. Maintenance department personnel will be redirected to remove MWR ID tags when repairs are completed.

SUMMARY STATEMENT:

Items covered by this inspection report have been discussed with operating shift personnel. In addition this response will be included as required reading for all operating shift personnel.

A uniform concern throughout these observations is the involvement of plant and corporate management in the operation of WNP-2. The Supply System is acutely aware of this concern and firmly believes that we have all levels of management appropriately involved with plant operation. We have in the past, and will continue to emphasize our management involvement in the operation of WNP-2.