PROPOSED CHANGE TO RTS-130
TO
DUANE ARNOLD ENERGY CENTER
TECHNICAL SPECIFICATIONS

The holders of License DPR-49 for the Duane Arnold Energy Center propose to amend Appendix A (Technical Specifications) to said license by deleting current pages and replacing them with the attached new proposed pages. A list of the affected pages is included.

The justification for this change is the incorporation of administrative changes into various sections of the DAEC Technical Specifications as listed below:

(1) Section 3.2/4.2-H is added to provide a reference to Tables 3.2-H and 4.2-H.

(2) Table 3.2-G is revised to reflect that the trip level setting of $\geq$ -38.5 in. indicated level is the reactor low-low water level rater than the reactor low water level. Also, the RPT system (response time) trip level setting is provided and the note that this value would be determined by testing is removed.

(3) Sections 3.13.B.2 and 3.13.B.3.b are revised to be consistent with the wording of Sections 3.13.A.3, 3.13.C.3 and 3.13.D.3. This is also consistent with Section 6.11.

(4) In Section 6.6 the Assistant Vice President - Nuclear Generation is replaced by Director, Nuclear Generation.

(5) Section 6.9 is revised to provide a proposed alternative to the requirements of 10CFR20 Paragraph 20.203 (c)(2).

(6) Section 6.11 is revised to add Specification 3.13.B.2 to the Fire Protection Systems for which Special Reports shall be submitted. This is consistent with Section 3.13.B.

LIST OF AFFECTED PAGES

3.2.4
3.2-23
3.13-4
6.6-1
6.9-1
6.9-2
6.9-3
6.9-4
6.11-11

| LIMITING CONDITION FOR OPERATION | SURVEILLANCE REQUIREMENT |
|---|---|
| G. Recirculation Pump Trip<br><br>(ATWS)<br><br>The limiting conditions for operation for the instrumentation that trips the recirculation pumps as a means of limiting the consequences of a failure to scram during an anticipated transient are given in Table 3.2-G.<br><br>(EOC)<br><br>The limiting conditions for operation for the instrumentation that trips the recirculation pumps during turbine stop valve or control valve fast closure for transient margin improvement (especially for end of cycle) are given in Table 3.2-G. | G. Recirculation Pump Trip<br><br>Instrumentation and logic shall be functionally tested, calibrated, and response time tested as indicated on Table 4.2-G. |
| H. Accident Monitoring Instrumentation<br><br>The limiting conditions for operation for the accident monitoring instrumentation are given in Table 3.2-H. | H. Accident Monitoring Instrumentation<br><br>Instrumentation shall be checked and calibrated as indicated in Table 4.2-H. |

TABLE 3.2-G

INSTRUMENTATION THAT INITIATES RECIRCULATION PUMP TRIP

| Minimum Number of Operable Instrument Channels per Trip System (1) | Instrument | Trip Level Setting | Number of Instrument Channels Provided by Design | Action |
|---|---|---|---|---|
| 1 | (ATWS) Reactor High Pressure | $\leq$ 1120 psig | 4 | (2) |
| 1 | (ATWS) Reactor Low-Low Water Level | $\geq$ -38.5 in. indicated level | 4 | (2) |
| 1 | (EOC) RPT Logic | N/A | 2 | (3) |
| 1 | (EOC) RPT System (Response Time) | $\leq$ 140 msec (4) | 2 | (3) |

NOTES FOR TABLE 3.2-G

1. Whenever the reactor is in the RUN Mode, there shall be one operable trip system for each parameter for operating recirculation pump. If this cannot be met, the indicated action shall be taken.

2. Reduce power and place the mode selector-switch in a mode other than the RUN Mode.

3. Two EOC RPT systems exist, either of which will trip both recirculation pumps. The systems will be individually functionally tested monthly. If the test period for one RPT systems exceeds 2 consecutive hours, the system will be declared inoperable. If both RPT systems are inoperable or if 1 RPT system is inoperable for more than 72 consecutive hours, an orderly power reduction shall be initiated and the reactor power shall be less than 85% within 4 hours.

4. This response time is from initiation of Turbine control valve fast closure or Turbine stop valve closure to actuation of the breaker secondary (auxiliary) contact.

| LIMITING CONDITIONS FOR OPERATION | SURVEILLANCE REQUIREMENT |
|---|---|
| | h. At least once per 18 months, during shutdown, by verifying the diesel starts from ambient conditions on the auto-start signal and operates for $\geq$ 30 minutes while loaded with the fire pump. |
| | i. At least once per 31 days by verifying that the diesel day tank contains fuel for two hours' operation. |
| | j. At least once per month by verifying that each valve in the flow path is in its correct position. |
| 2. When only one pump is operable, restore the second fire pump to operable status within 7 days or prepare and submit a Special Report to the Commission pursuant to specification 6.11 within the next 30 days outlining the plans and procedures to be used to provide for the loss of redundancy in this system. | 2. When it is determined that only one pump is operable, that pump shall be demonstrated operable immediately and daily thereafter until Specification 3.13.B.1 can be met. |
| 3. If no Fire Suppression Water System is operable: | |
| a. Establish a backup fire suppression water system within 24 hours; and | |
| b. Submit a Special Report to the Commission pursuant to Specification 6.11 within 30 days outlining the cause of the inoperability and the plans for restoring the system to operable status. | |
| c. If 3a above cannot be fulfilled, place the reactor in Hot Standby within the next six (6) hours and in Cold Shutdown within the following thirty (30) hours. | |
| 4. When the maintenance on the circulating water/fire water pump pit is performed, the river water supply system will be maintained in a condition to restore fire water supply within one hour and a roving fire watch will be established in all power block buildings. | |

## 6.6 REPORTABLE OCCURRENCE ACTION

6.6.1 Any reportable occurrence shall be reported immediately to the Chief Engineer and to the Director, Nuclear Generation, and promptly reviewed by the Operations Committee.

6.6.2 The Operations Committee shall prepare a separate report of each reportable occurrence. This report shall include an evaluation of the cause of the occurrence, a record of the corrective action taken, and also recommendation for appropriate action to prevent or reduce the probability of a recurrence.

6.6.3 Copies of all such reports shall be submitted to the Safety Committee for review and to the Director, Nuclear Generation for review and approval of any recommendations.

## 6.9 RADIOLOGICAL PROCEDURES

6.9.1 Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.

6.9.2 HIGH RADIATION AREA

In lieu of the "control device" or alarm signal" required by paragraph 20.203(c)(2) of 10 CFR 20, each high radiation area in which the intensity of radiation is greater than 100 mrem/hr but less than 1000 mrem/hr shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit.* Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:

a. A radiation monitoring device which continuously indicates the radiation dose rate in the area.

b. A radiation monitoring device which continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate level in the area has been established and personnel have been made knowledgeable of them.

c. A health physics qualified individual (i.e., qualified in radiation protection procedures) with a radiation dose rate monitoring device who is responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified by the facility Health Physics Supervisor in the Radiation Work Permit.

6.9.3 In addition to the requirements of 6.9.2, areas accessible to personnel with radiation levels such that a major portion of the body could receive in one hour dose greater than 1000 mrem shall be provided with locked doors to prevent unauthorized entry, and the keys shall be maintained under the administrative control of the Shift Supervisor Engineer on duty and/or health physics supervision. Doors shall remained locked except during

periods of access by personnel under an approved Radiation Work Permit which shall specify the dose rate levels in the immediate work area and the maximum allowable stay time for individuals in that area. For individual areas accessible to personnel with radiation levels such that a major portion of the body could receive in one hour dose in excess of 1000 mrem** that are located within large areas, where no enclosure exists for purposes of locking, and no enclosure can be reasonably constructed around the individual areas, then that area shall be roped off, conspicuously posted and a flashing light shall be activated as a warning device. In lieu of the stay time specification of the RWP, direct or remote continuous surveillance may be made by personnel qualified in radiation protection procedures to provide positive exposure control over the activities within the area.

* Health Physics personnel or personnel escorted by Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they are following plant radiation protection procedures for entry into high radiation areas.

** Measurement made at 18" from source of radioactivity.

| SPECIFICATION | SURVEILLANCE REQUIREMENT |
|---|---|
| 6.9.4 Source Leakage Test Radioactive sources shall be leak tested for contamination. The leakage test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie or more of removable contamination, it shall immediately be withdrawn from use, decontaminated and repaired, or be disposed of in accordance with Commission regulations.<br><br>Those quantities of by-product material that exceed the quantities listed in 10 CFR 30.71 Schedule B are to be leak tested in accordance with the schedule shown in Surveillance Requirements. All other sources (including alpha emitters) containing greater than 0.1 microcurie are also to be leak tested in accordance with the Surveillance Requirements. | 7.9.2 Source Leakage Test<br><br>A. Test for leakage and/or contamination shall be performed by the licensee or by other persons specifically authorized by the Commission or an agreement State, as follows:<br><br>1. Each sealed source, except startup sources subject to core flux, containing radioactive material, other than Hydrogen 3, with a half-life greater than thirty days and in any form other than gas shall be tested for leakage and/or contamination at intervals not to exceed six months.<br><br>2. The periodic leak test required does not apply to sealed sources that are stored and not being used. The sources excpeted from this test shall be tested for leakage prior to any use or transfer to another user unless they have been leak tested within six months prior to the date of use or transfer. In the absence of a certificate from a transferor indicating that a test has been made within six months prior to the transfer, sealed sources shall not be put into use until tested. |

| SPECIFICATION | SURVEILLANCE REQUIREMENT |
|---|---|
| | 3. Startup sources shall be leak tested prior to and following any repair or maintenance and before being subjected to core flux. |
| B. Reporting Requirements<br><br>Results of the leak tests performed on sources shall be included in the Annual Operating Report if the tests reveal the presence of 0.005 microcurie or more of removable contamination. | |

a. Reactor vessel base, weld and heat affected zone metal test specimens (Specification 4.6.A.2).

b. I-131 dose equivalent exceeding 50% of equilibrium value (Specification 4.6.B.1.h).

c. Inservice inspection (Specification 4.6.G).

d. Reactor Containment Integrated Leakage Rate Test (Specification 4.7.A.2.f).

e. Auxiliary Electrical System - Operation with inoperable components (Specification 3.8.B.4).

f. Fire Protection Systems (Specifications 3.13.A.3, 3.13.B.2, 3.13.B.3, 3.13.C.3, and 3.13.D.3).