U-600885
L30-87(03-20)-L
8E.110

ILLINOIS POWER COMPANY

CLINTON POWER STATION, P.O. BOX 678, CLINTON, ILLINOIS 61727

MAR 20 1987

Docket No. 50-461

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Clinton Power Station Technical Specifications for Full Power Operating License

Dear Mr. Denton:

This letter supplements Illinois Power Company's (IP) letters dated January 8, 1987 (U-600785), February 4, 1987 (U-600817), and March 3, 1987 (U-600848) and provides additional changes that IP requests be included in the Technical Specifications (CPS-TS) which will accompany the full-power operating license for Clinton Power Station. Additionally, information is being supplied to clarify the NRC concerns pertaining to changes in CPS-TS setpoints for the LPCS/LPCI permissive interlocks (U-600848). These changes represent clarification and enhancements to the CPS-TS and have been discussed with your Mr. B. L. Siegel, Clinton NRC Project Manager. The justifications and the proposed marked-up pages are attached. None of these changes affect IP's ability to safely operate the Clinton Power Station under its current license. Therefore, no amendment to the present low-power license (NPF-55) is being requested.

These changes to the CPS-TS have been reviewed and are consistent in all material aspects with the FSAR as amended, the Safety Evaluation Report and its Supplements Nos. 1-7 and the as-built plant. An affidavit relating to this certification accompanies this letter.

If you have any questions or require additional information, please contact me.

Sincerely yours,

D. P. Hall
Vice President



RFP/bsa

Attachment

A001
1/1

cc: B. L. Siegel, NRC Clinton Licensing Project Manager
NRC Regional Administrator, Region III
NRC Resident Office
Illinois Department of Nuclear Safety

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STATE OF ILLINOIS

COUNTY OF DEWITT

DONALD P. HALL, Being first duly sworn, deposes and says: That he is Vice President of Illinois Power Company; that the information provided in letter U-600885 to certify that the Clinton Power Station (CPS) Technical Specifications are consistent with the CPS - Final Safety Analysis Report, the NRC Safety Evaluation Report and the as-built facility, has been prepared under his supervision and direction; that he knows the contents thereof; and that to the best of his knowledge and belief said request and the facts contained therein are true and correct.

DATED: This 20th day of March 1987

Signed: D Hall
Donald P. Hall

Subscribed and sworn to before me this 20th day of March, 1987.

Linda S. Chamberlain
Notary Public

My commission expires:

February 11, 1990

Description of Change

Specification 3/4.6.1.7, page 3/4 6-11. Add a note to define the requirements for "arithmetical average" and provide for continued plant operation and flexibility in performance of instrument maintenance which may render the subject instrument inoperable.

* The arithmetical average shall consist of at least one reading from one location per quadrant of the above locations. However, all available instruments should be used in determining the arithmetical average.

Justification

Unlike other instrumentation Specifications, this Specification has no provisions for continued plant operation if the subject instruments are found to be inoperable or if the subject instruments are rendered inoperable by the performance of planned maintenance or testing. Other instrumentation Specifications consider a minimum-operable-channels concept in evaluating conditions for continued plant operation. Other Specifications also recognize that surveillance and maintenance are commonplace requirements and that operation of the plant should not be jeopardized as long as minimum requirements are fulfilled.

This Specification utilizes redundant instrumentation in each quadrant. Containment temperature instrumentation contained in Specification 3/4.3.7.5, Accident Monitoring Instrumentation, is additional and separate from this Specification, and has requirements for operability contained therein. The instruments of this Specification do not provide any automatic initiation/actuation of safety-related systems. The addition of this note establishes a minimum requirement of four instruments, consisting of at least one in four quadrants of the containment. In addition, the note requires the operator to use all available instrumentation of this Specification in determining the arithmetical average temperature.

This change is consistent with the NRC's policy as exhibited by the NRC's issuance of similar Specifications (attached) in the full power operating license of the Perry Nuclear Plant (NUREG-1204 page 3/4 6-11).

## CONTAINMENT SYSTEMS

## PRIMARY CONTAINMENT AVERAGE AIR TEMPERATURE

### LIMITING CONDITION FOR OPERATION

3.6.1.7 Primary containment average air temperature shall not exceed 122°F.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

With the primary containment average air temperature greater than 122°F, reduce the average air temperature to within the limit within 8 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

### SURVEILLANCE REQUIREMENTS

4.6.1.7 The primary containment average air temperature shall be the arithmetical average* of the temperatures at the following locations and shall be determined to be within the limit at least once per 24 hours:

| | Elevation | Azimuth | Division |
|---|---|---|---|
| a. | 778' - 0" | 82° | I |
| b. | 778' - 0" | 105° | I |
| c. | 778' - 0" | 170° | II |
| d. | 778' - 0" | 190° | II |
| e. | 778' - 0" | 262° | I |
| f. | 778' - 0" | 284° | II |
| g. | 778' - 0" | 335° | I |
| h. | 778' - 0" | 29° | II |

* The arithmetical average shall consist of at least one reading from one location per quadrant of the above locations. However, all available instruments should be used in determining the arithmetical average.

## CONTAINMENT SYSTEMS

## PRIMARY CONTAINMENT AVERAGE AIR TEMPERATURE

### LIMITING CONDITION FOR OPERATION

3.6.1.7 Primary containment average air temperature shall not exceed 90°F.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3.

ACTION:

With the primary containment average air temperature greater than 90°F, reduce the average air temperature to within the limit within 8 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

### SURVEILLANCE REQUIREMENTS

4.6.1.7 The primary containment average air temperature shall be the arithmetical average* of the temperatures at the following locations and shall be determined to be within the limit at least once per 24 hours:

| | Elevation | Azimuth |
|---|---|---|
| a. | 720'-6" | 280° |
| b. | 720'-6" | 100° |
| c. | 689'-4" | 40° |
| d. | 689'-4" | 210° |
| e. | 647'-0" | 54° |
| f. | 645'-6" | 251° |
| g. | 613'-0" | 69° |
| h. | 613'-0" | 251° |

*At least one reading from each elevation for an arithmetical average. However, all available instruments should be used in calculating the arithmetical average.

Description of Change

Specification 3/4.6.2.6, page 3/4 6-20. Add the following notes to define the requirements for "arithmetical average" and provide for continued plant operation and flexibility in performance of instrument maintenance which may render the subject instrument inoperable:

* The arithmetical average shall consist of at least one reading from each of the above listed elevations. However, all available instruments should be used in determining the arithmetical average.

\# The instruments at a. and h. are considered to be at the same elevation.

Justification

Unlike other instrumentation Specifications, this Specification has no provisions for continued plant operation if the subject instruments are found to be inoperable or if the subject instruments are rendered inoperable by the performance of planned maintenance or testing. Other instrumentation Specifications consider a minimum-operable-channels concept in evaluating conditions for continued plant operation. Other Specifications recognize that surveillance and maintenance are common-place requirements and that operation of the plant should not be jeopardized as long as minimum requirements are fulfilled.

This Specification utilizes redundant instrumentation for each listed elevation. Drywell Temperature instrumentation contained in Specification 3/4.3.7.5, Accident Monitoring Instrumentation, is additional and separate from this Specification, and has requirements for operability contained therein. The instruments of this Specification do not provide any automatic initiation/ actuation of safety-related systems.

The addition of these notes establishes a minimum requirement of seven instruments, consisting of at least one in each of the elevations of the drywell. In addition, note * requires the operator to use all available instrumentation of this Specification in determining the arithmetical average.

This change is consistent with the NRC's policy as exhibited by the NRC's issuance of similar Specifications (attached) in the full power operating license of the Perry Nuclear Plant (NUREG-1204 page 3/4 6-21).

## CONTAINMENT SYSTEMS

## DRYWELL AVERAGE AIR TEMPERATURE

### LIMITING CONDITION FOR OPERATION

3.6.2.6 Drywell average air temperature shall not exceed 135°F.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

With the drywell average air temperature greater than 135°F, reduce the average air temperature to within the limit within 8 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

### SURVEILLANCE REQUIREMENTS

4.6.2.6 The drywell average air temperature shall be the arithmetic average * of the temperatures at the following locations and shall be determined to be within the limit at least once per 24 hours:

| Instrument Number | Elevation | Azimuth |
|---|---|---|
| a. ITE-VP033A | 729'-0" # | 45° |
| b. ITE-VP033B | 775'-0" | 160° |
| c. ITE-VP033C | 741'-0" | 45° |
| d. ITE-VP033D | 772'-0" | 130° |
| e. ITE-VP033E | 802'-0" | 0° |
| f. ITE-VP033F | 746'-0" | 307° |
| g. ITE-VP033G | 794'-0" | 0° |
| h. ITE-VP034A | 732'-0" # | 225° |
| i. ITE-VP034B | 775'-0" | 230° |
| j. ITE-VP034C | 741'-0" | 220° |
| k. ITE-VP034D | 772'-0" | 235° |
| l. ITE-VP034E | 802'-0" | 180° |
| m. ITE-VP034F | 746'-0" | 135° |
| n. ITE-VP034G | 794'-0" | 180° |

* The arithmetical average shall consist of at least one reading from each of the above listed elevations. However, all available instruments should be used in determining the arithmetical average.

# The instruments at a. and h. are considered to be at the same elevation.

## CONTAINMENT SYSTEMS

## DRYWELL AVERAGE AIR TEMPERATURE

### LIMITING CONDITION FOR OPERATION

3.6.2.6 Drywell average air temperature shall not exceed 135°F.

APPLICABILITY: OPERATONAL CONDITIONS 1, 2 and 3.

ACTION:

With the drywell average air temperature greater than 135°F, reduce the average air temperature to within the limit within 8 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

### SURVEILLANCE REQUIREMENTS

4.6.2.6 The drywell average air temperature shall be the arithmetical average* of the temperatures at the following locations and shall be determined to be within the limit at least once per 24 hours:

| | Elevation | Azimuth |
|---|---|---|
| a. | 653'-8" | 315° |
| b. | 653'-8" | 135° |
| c. | 634'-0" | 308° |
| d. | 634'-0" | 145° |
| e. | 605'-0"# | 308° |
| f. | 604'-6"# | 150° |

*At least one reading from each elevation for an arithmetical average. However, all available instruments should be used in calculating the arithmetical average.
#The instruments at e. and f. are considered to be at the same elevation.

Description of Change

Specification 4.8.2.1.d.2.a), b), and c), pages 3/4 8-13 and 3/4 8-14. Revise the load profile for the Division I, II, and III batteries as indicated in the marked-up page.

Justification

As indicated in the Clinton Power Station Safety Evaluation Report, NUREG 0853 (SER) Section 9.6.6, the NRC Staff required the installation of a prelubrication system (equivalent to that described in EMD's MI-9644) that meets the manufacturer's recommendation. This prelubrication system installation has been completed and, as a result, certain changes are required to the Technical Specifications to account for the load of the DC powered prelubrication pump motor. In addition to adding the load of the prelubrication pump motor, IP has reevaluated the actual loads, based on the as-built configuration, instead of using conservative estimates to determine the load profile. In the case of the Division III battery, the actual load evaluation has resulted in an overall decrease in the total battery load as shown in the revised load profile in the change to the Technical Specifications. These added loads are not significant with respect to battery capacity, and analysis in accordance with IEEE 485 has shown that the batteries are capable of supplying the new loads now and at the end of their twenty year life. Battery testing requirements in IEEE 450 do not require retesting for small load additions. As this change in load is not substantial, no retesting will be performed.

Changes to Tables 8.3-8, 8.3-9, and 8.3-10 and subsections 9.5.5.5, 9.5.7.2., 9.5.7.5, Q&R 40.58, Q&R 40.60, and associated figures in the Clinton Power Station Final Safety Analysis Report (FSAR) will be made in the next FSAR submittal.

ELECTRICAL POWER SYSTEMS

DC SOURCES - OPERATING

SURVEILLANCE REQUIREMENTS (Continued)

4.8.2.1 (Continued)

b. At least once per 92 days and within 7 days after a battery discharge with battery terminal voltage below 110 volts, or battery overcharge with battery terminal voltage above 150 volts, by verifying that:

1. The parameters in Table 4.8.2.1-1 meet the Category B limits,

2. There is no visible corrosion at either terminals or connectors, or the connection resistance of these items is less than $150 \times 10^{-6}$ ohms, and

3. The average electrolyte temperature of the pilot cells and representative cells* of connected cells is above 65°F.

c. At least once per 18 months by verifying that:

1. The cells, cell plates and battery racks show no visual indication of physical damage or abnormal deterioration,

2. The cell-to-cell and terminal connections are clean, tight, free of corrosion and coated with anti-corrosion material,

3. The resistance of each cell-to-cell and terminal connection is less than or equal to $150 \times 10^{-6}$ ohms, and

4. The battery charger will supply at least 300 amperes for Divisions I and II and 100 amperes for Division III and IV at a minimum of 125 volts for at least 4 hours.

d. At least once per 18 months, during shutdown, by verifying that either:

1. The battery capacity is adequate to supply and maintain in OPERABLE status all of the actual emergency loads for the design duty cycle when the battery is subjected to a battery service test, or

2. The battery capacity is adequate to supply a dummy load of the following profile while maintaining the battery terminal voltage greater than or equal to 105 volts.

a) Division I

561 ≥ ~~549~~ amperes for the first 60 seconds
239 ≥ ~~227~~ amperes for the next 59 minutes
159 ≥ ~~147~~ amperes for the next 180 minutes

*IEEE-450 shall be used for the purpose of defining representative cells.

ELECTRICAL POWER SYSTEMS

DC SOURCES - OPERATING

SURVEILLANCE REQUIREMENTS (Continued)

4.8.2.1 (Continued)

b) Division II

≥ ~~404~~ 452 amperes for the first 60 seconds
≥ ~~274~~ 286 amperes for the next 59 minutes
≥ ~~86~~ 98 amperes for the next 180 minutes

c) Division III

≥ ~~135~~ 112 amperes for the first 60 seconds
≥ ~~54~~ 52 amperes for the next 239 minutes

d) Division IV

≥ 127 amperes for the first 60 seconds
≥ 117 amperes for the next 59 minutes
≥ 44 amperes for the next 180 minutes

e. At least once per 60 months, during shutdown, by verifying that the battery capacity is at least 80% of the manufacturer's rating when subjected to a performance discharge test. Once per 60 month interval, this performance discharge test may be performed in lieu of the battery service test.

f. At least once per 18 months, during shutdown, performance discharge tests of battery capacity shall be given to any battery that shows signs of degradation or has reached 85% of the service life expected for the application. Degradation is indicated when the battery capacity drops more than 10% of rated capacity from its average on previous performance tests, or is below 90% of the manufacturer's rating.

Description of Change

Specification 3/4.3.7.8 and BASES, pages 3/4 3-92 and B 3/4 3-7; Specification 3/4.7.2, page 3/4 7-5. Modify the appropriate Specifications to account for alternate methods for use and storage of chlorine gas on site.

Justification

The Clinton Power Station Final Safety Analysis Report (FSAR) provided results of the protection of control room operators against the accidental release of chlorine as required by the guidance presented in Regulatory Guide 1.95. As described in the FSAR, a major contributor to the chlorine hazard is the storage of chlorine in individual containers having an inventory of greater than 150 pounds.

Regulatory Guide 1.95, position C.2 allows a manual isolation capability of the control room HVAC (VC) system if chlorine is stored in containers with an individual inventory of less than 150 pounds and at a distance from the control room of greater than 100 Meters.

Clinton Power Station (CPS) has evaluated its methods of use and storage of chlorine within the owner controlled area on site. CPS has evaluated methods to reduce the hazard presented by the current practice of using chlorine in individual containers of one ton capacity. CPS plans to reduce the use of gaseous chlorine in treatment of water systems.

IP intends to remove individual containers of chlorine weighing greater than 150 pounds, i.e., 1 ton containers, and eventually establish a solid or liquid water treatment system.

Until such time that a new system for water treatment can be made operational, the CPS Technical Specifications should be revised to accommodate operation with the reduced hazard comprised of storage of chlorine within the criteria of acceptance in position C.2 of Regulatory Guide 1.95. That is, chlorine will be stored in containers with individual capacities of less than or equal to 150 pounds at a distance of greater than 100 Meters (CPS actual distance is 126 Meters) from the nearest control room intake.

Clinton Power Station has surpassed the initial fuel load milestone. Note should be deleted.

BASES 3/4.3.7.8 should be revised to show the automatic initiation of the VC system chlorine mode of operation is not necessary when chlorine is stored in individual containers of less than or equal to 150 pounds.

Specification 4.7.2.e.2 should be appropriately footnoted to reveal that automatic transfer, to the chlorine mode of operation, is not required unless chlorine is stored, within the owner controlled area, in containers with individual capacities of greater than 150 pounds.

**INSTRUMENTATION**

**CHLORINE DETECTION SYSTEM**

LIMITING CONDITION FOR OPERATION

3.3.7.8 Two independent chlorine detection channels shall be OPERABLE with their trip setpoints adjusted to actuate at a chlorine concentration of ≤ 5 ppm.†

APPLICABILITY: All OPERATIONAL CONDITIONS and *.

ACTION:

a. With one chlorine detection channel inoperable, restore the inoperable detection channel to OPERABLE status within 7 days, or within the next 6 hours, initiate and maintain operation of at least one control room emergency filtration system subsystem in the chlorine mode of operation.

b. With both chlorine detection channels inoperable, within 1 hour initiate and maintain operation of at least one control room emergency filtration system subsystem in the chlorine mode of operation.

c. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.7.8 Each of the above required chlorine detection channels shall be demonstrated OPERABLE by performance of a:

a. CHANNEL CHECK at least once per 12 hours,
b. CHANNEL FUNCTIONAL TEST at least once per 31 days, and
c. CHANNEL CALIBRATION at least once per 18 months.

*When irradiated fuel is being handled in the secondary containment.
†The operability requirement for the chlorine detection system is suspended until the initial fuel load is completed and prior to placing the reactor mode switch in STARTUP for the initial criticality.

BASES

3/4.3.7.7 TRAVERSING IN-CORE PROBE SYSTEM (Continued)

by comparing the detector(s) output with data obtained during the previous LPRM calibrations.

3/4.3.7.8 CHLORINE DETECTION SYSTEM

The OPERABILITY of the chlorine detection system ensures that an accidental chlorine release will be detected promptly and the necessary protective actions will be automatically initiated to provide protection for control room personnel. Upon detection of a high concentration of chlorine, the control room ventilation system will automatically be placed in the chlorine mode of operation to provide the required protection. The detection systems required by this specification are consistent with the recommendations of Regulatory Guide 1.95, "Protection of Nuclear Power Plant Control Room Operators Against an Accidental Chlorine Release," January, 1977.

3/4.3.7.9 FIRE DETECTION INSTRUMENTATION

Deleted

3/4.3.7.10 LOOSE-PART DETECTION SYSTEM

The OPERABILITY of the loose-part detection system ensures that sufficient capability is available to detect loose metallic parts in the primary system and avoid or mitigate damage to primary system components. The allowable out-of-service times and surveillance requirements are consistent with the recommendations of Regulatory Guide 1.133, "Loose-Part Detection Program for the Primary System of Light-Water-Cooled Reactors," May 1981.

Automatic initiation is only required when chlorine is stored within the owner controlled area in containers with individual capacities of greater than 150 pounds

PLANT SYSTEMS

CONTROL ROOM VENTILATION SYSTEM

SURVEILLANCE REQUIREMENTS (Continued)

4.7.2 (Continued)

d. After every 720 hours of charcoal adsorber operation, by verifying within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978*, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978*, for a methyl iodide penetration of less than 0.175% for the makeup filter system carbon adsorber and 6% for the recirculation filter system carbon adsorber when tested; in accordance with ASTM D3803-70 methods, with the following parameters:

Make Up Filter System

| | | |
|---|---|---|
| a) | Bed Depth | - 4 inches |
| b) | Velocity | - 40 fpm |
| c) | Temperature | - 30°C |
| d) | Relative Humidity | - 70% |

Recirculation Filter System

| | | |
|---|---|---|
| a) | Bed Depth | - 2 inches |
| b) | Velocity | - 80 fpm |
| c) | Temperature | - 30°C |
| d) | Relative Humidity | - 70% |

e. At least once per 18 months by:

1. Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches Water Gauge while operating the makeup filter system at a flow rate of 3000 cfm ± 10%.

2. Verifying that on a high chlorine actuation** and a manual initiation test signal, the system automatically** switches to the chlorine mode of operation and the dampers close within 2 seconds.

3. Verifying that the control room leak rate is limited to ≤ 4000 cfm ± 10% at ≥ 1/8-inch Water Gauge (W.G.) with respect to adjacent areas.

4. Verifying that on a smoke mode actuation test signal, the system automatically switches to the smoke mode of operation at a flow rate less than or equal to 64,000 cfm ± 10%.

5. Verifying that on a high radiation actuation test signal, the system automatically switches to the high radiation mode of operation and

*ANSI N510-1980 shall be used in place of ANSI N510-1975 as referenced in Regulatory Guide 1.52, Revision 2, March 1978.

**Automatic transfer to the chlorine mode is not required unless chlorine is stored within the owner controlled area in containers with cap. ≥ 150 lbs.

Description of Change

Table 3.3.3-2 page 3/4 3-39, 40. Submitted dated March 3, 1987 U-600848.

Justification

Page 5 of 23 of the attachment to letter U-600848 presented changes to the CPS-TS. The NRC's Messrs. B. Siegel and D. Katze expressed concerns over the change in the analytical limit for the subject setpoint change.

The analytical limit for the LPCI/LPCS injection valve permissive was changed from 454 psig to 415 psig. The new analytical limit is conservatively less than the existing analytical limit.

The interlocks serve two functions:

- To inhibit opening of the LPCI and LPCS injection valves to the Reactor when the reactor pressure is above the piping design pressure of the LPCI and LPCS systems, and

- To permit opening of the LPCI and LPCS injection valves to the Reactor when safety injection is required for core cooling following a Loss of Coolant Accident (LOCA).

These two interlock functions are satisfied by establishing an upper Analytical Limit below which the design pressure of the piping can permit opening of the injection valves, and a lower Analytical Limit above which opening of the injection valves can be accomplished soon enough to provide adequate core cooling following a LOCA. A setpoint is chosen between the upper and lower Analytical limits such that, with predicted instrument loop inaccuracies, both functions of the interlock will be assured.

The Clinton specific setpoint represents a response to the NRC requirements on setpoint methodology including effects of environmental parameters. As described in the previous submittal (U-600848) these instruments were susceptible to inaccuracies because of exposure to radiation doses typical of a LOCA. The cause of this inaccuracy is excessive conservatism in radiation source term values, the severity of which was not foreseen at the time the instrument system was designed and purchased. This condition has been analyzed and this concern does not constitute a substantial safety hazard. The overall change in PCT due to this evaluation of the interlock function and change in analytical limit has resulted in an increase of approximately 18°F in PCT.

Additionally, CPS has continued its participation in the BWROG Instrument Setpoint Methodology Program (ISM), and as a result, evaluated and made changes to analytical limits for Reactor Water Level measurement, LL1, LL2 and LL3. In essence, CPS has accounted for Process Measurement Accuracy (PMA) in the methodology for Reactor Water Level LL1, LL2 and LL3. This increase in the CPS specific analytical limit was analyzed and has contributed a 1°F change to PCT. The existing analytical limits for the respective level are presented as follows:

| | Existing Analytical Limit | New Analytical Limit |
|---|---|---|
| LL1 | -150 in. | -152.6 in. |
| LL2 | - 50 in. | - 52.6 in. |
| LL3 | +7.7 in. | + 7.6 in. |

These changes are all in the conservative direction and therefore no Technical Specification changes are required.

In June of 1986, CPS met with NRC and discussed closure times for those systems penetrating containment. As a result, CPS included in the CPS-TS BASES 3.6.4 the criteria for determining valve operability when evaluating the stroke time of the subject valves.

Subsequently CPS has evaluated relaxations in system requirements for the bounding times determined by CPS-TS 3.6.4 BASES. The baseline value was obtained by actual testing (actual valve time 20 sec.). This relaxation of the LPCI and LPCS injection valves 1E12F042AC and 1E12-F005 respectively was evaluated for the subject system performance in the Plant Specific ECCS analysis. The overall effect was an increase in PCT of 15°F.

A new ECCS analysis has been performed for Clinton considering the following changes to three above described input parameters:

1) Updated analytical limits for LPCI/LPCS injection valves permissive.

2) Updated analytical limits for level setpoints LL1, LL2 and LL3, and

3) MOV closure time relaxations.

The assessment for the Design Basis Accident-recirculation suction line break with LPCI D/G failure (Reference CPS-FSAR Table 6.3-3) - has yielded a PCT increase by 34°F and the oxidation fraction will increase by 0.003. Since PCT for the previous FSAR case is 2071°F there is sufficient margin available to the 2200°F limit of 10CFR50.46 to absorb the increase resulting from reanalysis.