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Carolina Power & Light Company

July 23, 1979

FILE: NG-3514(B)

SERIAL: GD-79-1844

Office of Nuclear Reactor Regulation  
Attention: Mr. T. A. Ippolito, Chief  
Operating Reactors Branch No. 3  
United States Nuclear Regulatory Commission  
Washington, D.C. 20555

BRUNSWICK STEAM ELECTRIC PLANT UNIT NOS. 1 AND 2  
DOCKET NOS. 50-325 AND 50-324  
LICENSE NOS. DPR-71 AND DPR-62  
SEISMIC ANALYSIS OF SAFETY RELATED PIPING

Dear Mr. Ippolito:

In early April, Carolina Power & Light Company had discussions with the NRC staff concerning the use of the ADLPIPE computer code for analyzing pipe stresses for our Brunswick Steam Electric Plant (BSEP), Units 1 and 2. This code employed algebraic summations in the seismic analysis portion. In our April 24, 1979 response to IE Bulletin 79-07, Seismic Analysis of Safety-Related Piping, we committed to a total reanalysis of safety-related piping following NRC's acknowledgement that our new approach was satisfactory. In our meeting on May 16, 1979, we further committed to have this analysis completed by July 21, 1979. We have completed the objectives of our commitment of May 16, 1979; however, subsequent commitments have resulted in additional reanalysis requirements which are in progress and which will be completed by August 3, 1979. To assist in understanding the scope and the sequence of this reanalysis effort, a chronology of meetings and letters is presented in Attachment 1.

The safety-related piping for BSEP is identified on piping isometrics for stress analysis. In the final analysis, 195 isometrics were reanalyzed. These were arranged in six priority categories for reanalysis, where the larger piping in the pressure boundary and the emergency core cooling systems were analyzed first, as described in our letter of May 16, 1979. We have completed the pipe stress analysis for all six categories and have previously submitted to you the results of categories 1 through 5, and a "bump factor" category in our letter of April 24, May 21, May 29, June 4 and July 3, 1979. (Isometrics 300, 301 and 302, service water lines in Category 4 have been deleted from further analysis as these lines are blanked off and are not in service at this time.) Attachment 2 to this letter presents the pipe stress analysis data for the final Category 6. As shown, Isometrics 213, 713 and 215 have calculated stresses which exceed allowable (stress greater than  $1.8 S_h$ ), but maintain structural integrity (stress less than  $2.4 S_h$ ). In accordance with our previous

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commitments, we notified your staff on July 20, 1979 about these lines; and Lines 128 and 161 which were recently found to exceed allowable stresses, but maintained structural integrity, when analyzed for as-built differences and for valve eccentricity, respectively. A summary of the acceptability of the stress analysis for each isometric analyzed, and whether a modification is, or was, required is shown on Attachment 3.

As stated previously, commitments made subsequent to beginning our reanalysis effort have resulted in extending completion of the total reanalysis. In the meeting with the NRC on May 30, 1979, the modeling of valve operators in the pipe stress analyses was discussed. Previous analyses considered valve operator mass lumped together with the valve mass at the centroid of the valve. As a result of that meeting, it was decided to consider the effect due to the valve operator eccentricity in the reanalyses. Recognizing that the effects of valve operator eccentricity are more significant in small pipe size systems (4" diameter and smaller), and that at the time the commitment to reanalyze was made approximately 112 lines had already been analyzed (without valve operator eccentricity), and that most of these lines were in the larger pipe size category, it was decided to first incorporate the valve operator eccentricity into the lines left to be reanalyzed. These lines, which were in Classes 3, 4, 5 and 6, included the majority of the small size diameter piping system. Several pipe stresses were calculated to exceed allowable (but maintain structural integrity) as a result of the valve operator eccentricity, and were reported to NRC by telephone on June 22.

We are currently reanalyzing those lines previously reanalyzed where valve operator eccentricity should have been considered. Approximately 54 lines had to be reanalyzed, of which 29 are greater than 4" in diameter and 25 are 4" or less in diameter. Approximately 20 of these lines have been reanalyzed. A preliminary investigation of the unreanalyzed lines indicates that pipe stresses for the larger diameter category isometrics should not exceed the applicable allowable stresses. In the case of the small diameter lines we expect that structural integrity will not be impaired, based on analyses to date. Effects on supports cannot be precisely predicted for all these lines without a formal evaluation; however, we are confident that structural integrity of the supports and/or the associated piping will be maintained. Updated stress values will be submitted for these reanalyzed lines when they are available (about August 3, 1979.)

Our reanalysis effort on pipe support loads has progressed through the 195 isometrics. Currently, approximately nine supports, upon initial analysis, show structural integrity is not maintained and these are being reanalyzed taking out the conservatism in accordance with our criteria given to you in our May 29, 1979 letter. These supports should be reanalyzed and identified as either a long-term fix or a short-term fix by July 30, 1979. During the supports reanalysis, it was determined that three supports would not maintain structural integrity and, because the affected lines would not maintain structural integrity, the supports required prompt fixes. Supports at Data Points 50s and 80s on Isometric No. 4 (Unit 2) were reported by telephone to the NRC on July 2, 1979. At the time these support results became available, Unit 2 was in a shutdown mode and the supports were modified prior to startup. On July 6, we notified

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the NRC of a support at Data Point 80s, Isometric No. 4 (Unit 1) that did not meet structural integrity criteria. The support was on a redundant 12" steam line from HPCI to the RHR steam condensing manifold (Loop B). The loop was declared out of service and the support was promptly modified. Approximately 2,000 supports have been evaluated on each unit, with approximately 200 per unit identified as long-term fixes (by the end of the next refueling outage). A tabulation of the results of the evaluation of all pipe supports is not included with this submittal due to the large amount of data. However, the number of supports which fall into the "acceptable", "long-term fix", or "short-term fix" categories are summarized on Attachment 3.

Containment penetrations and equipment nozzles were also analyzed for the revised loads. Allowable stresses for both upset (1.2 S<sub>h</sub>) and emergency conditions (1.8 S<sub>h</sub>) were not exceeded. Safety class equipment, including the reactor pressure vessel, was reviewed to determine if the new load on nozzles exceeded the original loads previously accepted by the manufacturers. Where these original loads were exceeded due to increases from the new analyses, the manufacturers were contacted to determine the acceptability of the new loads. Loads on all reactor vessel nozzles and five General Electric supplied equipment nozzles were forwarded to General Electric for verification of acceptability. These have all been reviewed and loads are within code allowable. New loads on the RHR service water booster pumps are being reviewed by the manufacturer and results will be available about July 30.

Our commitment to compare as-built configuration verification with the as-designed (as analyzed) configurations has resulted in detecting approximately 64 differences. Many of these differences were small dimensional differences and had no impact on the analysis. In accordance with our previously submitted criteria, these differences were and are being evaluated and, where required, reanalyzed. Over half of these differences have been evaluated. Based on a computer reanalysis of some of the differences and the magnitude of the remaining, we have a high degree of confidence that the stresses and supports will be within the structural integrity criteria. This as-built verification and the evaluation and/or reanalysis of the differences, along with the criteria and data submitted to you previously in this reanalysis effort, satisfies the requirements of IE Bulletin 79-14, Seismic Analysis for As-Built Safety-Related Piping Systems, dated July 2, 1979, for the Brunswick Steam Electric Plant, Units 1 and 2.

In summary, Carolina Power & Light Company has conducted a thorough reanalysis of the safety-related piping and supports using an acceptable computer code. It should be noted here that no pipe stress exceeded allowable solely as a result of seismic analysis, but rather because of valve eccentricities or as-built/as-designed differences. Various lines and pipe supports have been identified as requiring long-term fixes. Design modifications are in progress and the modifications will be made as time permits between now and the end of

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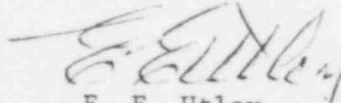
Mr. T. A. Ippolito

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the next refueling outage for each unit. Our commitment to totally review the as-built configuration to the as-analyzed configuration and make appropriate evaluations and/or reanalyses, has greatly increased our confidence that the piping systems at BSEP are designed and installed in accordance with acceptable criteria, and that continued operation will be without undue risk to the health and safety of the public.

Yours very truly,



E. E. Utley

Executive Vice President  
Power Supply & Customer Services

MAC/jcb

cc: Mr. James P. O'Reilly  
U. S. Nuclear Regulatory Commission  
Region II

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BRUNSWICK STEAM ELECTRIC PLANT  
SEISMIC ANALYSIS OF SAFETY RELATED PIPING  
CHRONOLOGY OF MAJOR EVENTS

April 4 - 6, 1979

CP&L had several telephone conversations with the NRC Staff concerning the computer code that was used for the original Brunswick Steam Electric Plant Stress Analysis. The results of a re-analysis of ten (10) lines completed by UE&C was discussed. The results indicated that the stresses and the loads were within acceptable values.

April 14, 1979

NRC IE Bulletin 79-07, Seismic Analysis of Safety Related Piping, was received which required a response from CP&L within ten days.

April 24, 1979

CP&L filed its response to IE Bulletin 79-07, which discussed the computer code that was used in the original stress analysis, the results of the re-analysis of the ten lines, a commitment to re-analyze all safety related piping in accordance with a specified criteria, and a discussion of the new UE&C ADLPIPE - 2 Computer Code that will be used in the re-analysis. The NRC was requested to acknowledge that this approach was acceptable prior to CP&L initiating the re-analysis effort.

May 15, 1979

CP&L met with UE&C and decided to proceed with the re-analysis even though the NRC had not responded to our request for their concurrence to our new approach for the seismic re-analysis. A re-analysis priority criteria was established, and analysis was initiated.

May 16, 1979

A meeting with the NRC Staff was held in which the quantitative results of the re-analysis of the first ten lines (pipe stress only) was presented. The details of the complete re-analysis effort was discussed with the NRC which included a discussion and quantitative results of the General Electric supplied safety related piping re-analysis. During this meeting a commitment was made to complete the total re-analysis effort, in accordance with the criteria previously presented to the NRC on April 24, by July 21, 1979. A letter from CP&L to the NRC dated May 15, 1979 was given to the NRC documenting the material that was presented to them at this meeting.

May 21, 1979

A meeting was held with CP&L, UE&C, and the NRC to discuss additional requests for data that the NRC had made and to present some results from the on going analysis. A letter from CP&L to the NRC, dated May 21, 1979, documented the material presented to the NRC. This letter identified the lines or isometrics that were to be re-analyzed, and placed each isometric into a re-analysis priority category. In addition, a schedule for the re-analysis was presented which shows completion by the July 21 date. There was a discussion on the confidence that the as-analyzed was the as-built configuration. The process

of up-dating engineering documents to as-built conditions was given to the NRC. Also during this meeting, there was considerable discussion on the conservatism that had been used previously in the relationship between the stresses calculated for the OBE case and those used for the DBE case. Data was presented which shows that the relationship between DBE to OBE was a factor of 1.2 rather than the 2.0 that had been used in the original analysis. It was stated that this would be the basis for future seismic analysis.

May 22, 1979

A letter from CP&L to the NRC documented that computer listings for the UE&C new seismic stress analysis program and that used by General Electric was given to the NRC during the May 21st meeting.

May 25, 1979

In the course of this re-analysis, it was determined that several types of fabricated steel pipe supports were under designed for torsion loading. In addition, it was discovered that several supports using concrete expansion bolts used the wrong allowable for specifying the required bolt size. These problems were discovered on approximately 10 supports and six of these were shown not to maintain structural integrity under the identified support loads. CP&L decided to shut the units down to make necessary modifications to the supports to insure their structural integrity and, at the same time, to have UE&C conduct a thorough review for all similar type supports to determine if these same problems existed. During this evaluation, approximately 44 pipe supports per unit were identified as requiring modification. These pipe supports were modified prior to returning the units to operation on June 12 and June 15 for Units 1 and 2 respectively.

May 30, 1979

A meeting was held with the NRC to discuss the additional information that had been requested, and the problems that had been encountered with the existing pipe support designs. A CP&L letter to the NRC dated May 29, 1979 discussed the pipe supports, the re-analysis of additional lines, the results of an IE inspection of the as-built configurations at Brunswick Steam Electric Plant, discussed the validity of the square root of the sum of the squares (SRSS) method versus the absolute sum method for the seismic analysis, identified the criteria that was to be used to report overstressed conditions to the NRC. In addition, CP&L made the commitment to conduct an as-built verification for all safety related piping inside the drywell prior to starting up the units. Also, at this meeting, the effect of the location of the valve operator in relation to the line stresses was discussed. Although the NRC did not require a commitment from CP&L to analyze for valve operator eccentricity, the correct technical approach would be to consider this item and a decision was made that the stress analysis should account for the operator location. Previous analysis lumped the mass of the operator at the valve location and not at some distance off of the line as is the case. It was decided to proceed with the remaining analysis incorporating this change and to re-analyze those lines that had been completed

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where this additional loading was applicable following the initial analysis.

June 4, 1979

A meeting was held with the NRC to discuss the results of the current pipe stress re-analysis effort. As of this date 112 lines had been re-analyzed for pipe stress. These lines did not include the valve eccentricity loading. In addition, the procedure used to determine if an as-built difference required re-analysis was discussed. At this meeting, the NRC stated that the units could start up after completing the modifications to the supports that had been previously identified, and after verifying as-built configuration in the drywell.

June 22, 1979

UE&C notified CP&L that three lines had pipe stress levels exceeding their FSAR allowable limits, but maintained their structural integrity. These high stresses resulted from valve operator eccentricity on small diameter lines (approximately 1" in diameter). UE&C was continuing their stress analysis, support analysis, and analysis of approximately 64 deviations that were noted between as-built and as analyzed configurations. The NRC was likewise notified in accordance with our commitment.

July 2, 1979

Two pipe supports on Unit 2 were determined to be overstressed which would require a fix because structural integrity was not maintained under the identified loads. Unit 2 was already in a shutdown mode and the modifications were made before returning to service. This was reported to the NRC in accordance with our previous commitments.

July 3, 1979

CP&L letter to the NRC transmitted the results of the stress analysis for Categories 3, 4, and 5.

July 6, 1979

A pipe support on Unit 1 was identified as requiring a modification to maintain structural integrity. This support was located on a redundant RHR loop and the modification was performed with the loop taken out of service, but the unit remained in service. NRC was notified of these results on July 6.

July 20, 1979

Five lines have been identified as being overstressed, but maintaining their structural integrity. These lines were reported to the NRC. Three lines were in Category 6 and two lines were a result of a re-analysis that was conducted for as-built differences and for valve eccentricities.

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## CATEGORY 6

EMERGENCY CONDITION  
STRESS SUMMARY (PSI)

| SYSTEM   | ISO. NO. | LINE SIZE      | ORIGINAL<br>TOTAL | ORIGINAL <sup>(1)</sup><br>SEISMIC | NEW<br>TOTAL | NEW <sup>(2)</sup><br>SEISMIC | ALLOWABLE | RATIO<br>NI/A |
|--|----------|----------------|-------------------|------------------------------------|--------------|-------------------------------|-----------|---------------|
| Containment Atmospheric Control                | 148      | 20",24"        | 8101              | 1868                               | 8054         | 1821                          | 27000     | 0.29          |
| Containment Atmospheric Control                | 149      | 18",24",30"    | 20687             | 18166                              | 15567        | 13046                         | 27000     | 0.57          |
| Instrument Air                                 | 180      | 3/4",2"        | 9614              | 8364                               | 7379         | 6129                          | 27000     | 0.27          |
| Containment Atmospheric Control                | 209,210  | 8",18",20",24" | 10870             | 8650                               | 8031         | 5811                          | 27000     | 0.29          |
| Residual Heat Removal                          | 546,565  | 4"             | 20416             | 17624                              | 11140        | 8348                          | 27000     | 0.41          |
| Instrument Air                                 | 178      | 1",1½",2"      | 11851             | 10710                              | 3141         | 2000                          | 27000     | 0.11          |
| Instrument Air                                 | 679      | 3/4",2"        | 11940             | 8660                               | 13193        | 9913                          | 27000     | 0.48          |
| Service Water                                  | 216      | 1½",2"         | 10090             | 8214                               | 5413         | 3537                          | 27000     | 0.20          |
| Instrument Air                                 | 306      | 1"             | 12183             | 9043                               | 7757         | 4616                          | 27000     | 0.28          |
| Instrument Air                                 | 682      | 1½",2"         | 12314             | 10975                              | 6678         | 5338                          | 27000     | 0.24          |
| Standby Gas Treatment                          | 150      | 18",24"        | 13333             | 12762                              | 11392        | 10821                         | 27000     | 0.42          |
| Instrument Air                                 | 177      | 3/4",2"        | 16406             | 15156                              | 9824         | 8574                          | 27000     | 0.36          |
| Instrument Air                                 | 675      | 3/4",2"        | 11262             | 10112                              | 8000         | 6850                          | 27000     | 0.29          |
| Instrument Piping                              | 202      | 3/4",1"        | 11476             | 5764                               | 9184         | 3460                          | 27000     | 0.34          |
| Instrument Air                                 | 677      | 3/4",2"        | 21584             | 20244                              | 7775         | 6435                          | 27000     | 0.28          |
| Residual Heat Removal and<br>Fuel Pool Cooling | 64       | 8"             | 17652             | 15652                              | 8907         | 6907                          | 27000     | 0.32          |
| Instrument Air                                 | 174      | 2"             | 2496              | 1246                               | 1818         | 568                           | 27000     | 0.06          |

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| SYSTEM                                       | ISO NO. | LINE SIZE         | ORIGINAL<br>TOTAL | ORIGINAL <sup>(1)</sup><br>SEISMIC | NEW<br>TOTAL | NEW <sup>(2)</sup><br>SEISMIC | ALLOWABLE            | RATIO<br>NT/A |
|--|---------|-------------------|-------------------|------------------------------------|--------------|-------------------------------|----------------------|---------------|
| Instrument Air                               | 182     | 2"                | 20284             | 19034                              | 10121        | 8871                          | 27000                | 0.37          |
| Fuel Pool Cooling & Residual<br>Heat Removal | 138,139 | 6",8"             | 21127             | 17094                              | 13118        | 9358                          | 27000                | 0.48          |
| Instrument Air                               | 186     | 2"                | 16026             | 14776                              | 8919         | 7669                          | 27000                | 0.33          |
| Residual Heat Removal & Fuel<br>Pool Cooling | 144,145 | 4",6",8",10",12"  | 15862             | 13712                              | 10568        | 6526                          | 27000                | 0.39          |
| Nitrogen System                              | 231     | 3/4"              | 6436              | 5372                               | 3101         | 2037                          | 27000                | 0.11          |
| Instrument Air                               | 176     | 3/4",2"           | 2454              | 1204                               | 2501         | 1251                          | 27000                | 0.09          |
| Nitrogen System                              | 232     | 3/4"              | 8281              | 7204                               | 4312         | 3235                          | 27000                | 0.15          |
| Service Water                                | 218     | 1½",2"            | 18318             | 15052                              | 15356        | 12090                         | 27000                | 0.56          |
| Core Spray                                   | 166     | 3/4",1",2"        | 4898              | 2850                               | 4300         | 1290                          | 27000                | 0.15          |
| Instrument Air                               | 183     | 3/4",2"           | 14961             | 13836                              | 7032         | 5782                          | 27000                | 0.26          |
| Instrument Air                               | 674     | 3/4",1½",2"       | 6405              | 5065                               | 4625         | 3284                          | 27000                | 0.17          |
| Service Water                                | 214     | 3/4",1",1½",2"    | 18556             | 17610                              | 14714        | 12556                         | 27000                | 0.54          |
| Nitrogen System                              | 233     | 3/4",1",2"        | 8901              | 7824                               | 5765         | 4688                          | 27000                | 0.21          |
| Containment Atmospheric Control              | 213     | ½",3/4",1",2"     | 11831             | 6408                               | 26902        | 26750 <sup>(3)</sup>          | 44800 <sup>(4)</sup> | 0.60          |
| Containment Atmospheric Control              | 713     | ½",3/4",1",2"     | 20574             | 14480                              | 35604        | 29511 <sup>(3)</sup>          | 44800 <sup>(4)</sup> | 0.79          |
| Instrument Air                               | 680     | 3/4",2"           | 8153              | 4812                               | 9277         | 7936                          | 27000                | 0.34          |
| Instrument Air                               | 681,691 | 3/4",2"           | 11483             | 10142                              | 7211         | 5870                          | 27000                | 0.26          |
| Instrument Air                               | 175     | 3/4",2"           | 14973             | 13812                              | 18331        | 17081 <sup>(3)</sup>          | 27000                | 0.67          |
| Service Water                                | 215     | ½",3/4",1",1½",2" | 19128             | 15778                              | 35143        | 30892 <sup>(3)</sup>          | 44800 <sup>(4)</sup> | 0.78          |

(1) Original Seismic = 2 x OBE

(3) New Seismic for this case calculated using actual DBE Response Spectra

(2) New Seismic = 1.2 x OBE

(4) Structural integrity for stainless steel

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## NRC IE 79-07 RE-EVALUATION SUMMARY

## PRIORITY CATEGORY I

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| ISO NO. | SYSTEM                          | PIPE STRESSES |         |         | SUPPORT LOADS |             |             | REMARK   |
|---------|---------------------------------|---------------|---------|---------|---------------|-------------|-------------|--|
|         |                                 | ACC (1)       | LTF (2) | STF (3) | ACC NO. (1)   | LTF NO. (2) | STF NO. (3) |  |
| 1       | Residual Heat Removal           | Yes           | None    | None    | 30            | 10          | 3           | STF - Due to original support under design, fixes implemented May/June 1979  |
| 2       | Residual Heat Removal           | Yes           | None    | None    | 24            | 1           | 1           | STF - Due to original support under design, fixes implemented May/June 1979  |
| 3       | Residual Heat Removal           | Yes           | None    | None    | 34            | 5           | 2           | STF - Due to original support under design, fixes implemented May/June 1979  |
| 4       | High Pressure Coolant Injection | Yes           | None    | None    | 16            | 1           | 2           | STF - Due to support load carrying capability. Repaired during snubber inspection outage in July - Unit 2. Unit 1 repaired week of July 7. |
| 5       | Residual Heat Removal           | Yes           | None    | None    | 3             | 1           | 0           |  |
| 10      | High Pressure Coolant Injection | Yes           | None    | None    | 15            | 3           | 0           |  |
| 11      | High Pressure Coolant Injection | Yes           | None    | None    | 6             | 2           | 0           |  |
| 13      | Residual Heat Removal           | Yes           | None    | None    | 18            | 0           | 0           |  |
| 14      | Nuclear Steam System            | Yes           | None    | None    | 13            | 0           | 0           |  |
| 15C     | Nuclear Steam System            | Yes           | None    | None    | 8             | 0           | 1           | STF - Due to original support under design, fixes implemented May/June 1979  |
| 21      | Reactor Core Isolation Cooling  | Yes           | None    | None    | 9             | 0           | 0           |  |
| 22      | Reactor Water Cleanup           | Yes           | None    | None    | 3             | 0           | 0           |  |
| 25      | Residual Heat Removal           | Yes           | None    | None    | 14            | 0           | 0           |  |
| 27      | Control Rod Drive               | Yes           | None    | None    | 11            | 0           | 0           |  |
| 28      | Residual Heat Removal           | Yes           | None    | None    | 24            | 2           | 3           | STF - Due to original support under design, fixes implemented May/June 1979  |

## NRC IE 79-07 RE-EVALUATION SUMMARY

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| ISO NO. | SYSTEM                | PIPE STRESSES |         |         | SUPPORT LOADS  |                |                | REMARK  |
|---------|-----------------------|---------------|---------|---------|----------------|----------------|----------------|---|
|         |                       | ACC (1)       | LTF (2) | STF (3) | ACC (1)<br>NO. | LTF (2)<br>NO. | STF (3)<br>NO. |   |
| 32      | Nuclear Steam System  | Yes           | None    | None    | 21             | 0              | 0              |   |
| 36      | Control Rod Drive     | Yes           | None    | None    | 9              | 0              | 0              |   |
| 41      | Residual Heat Removal | Yes           | None    | None    | 5              | 0              | 0              |   |
| 42      | Residual Heat Removal | Yes           | None    | None    | 2              | 1              | 1              | STF - Due to original support under design, fixes implemented May/June 1979   |
| 52      | Residual Heat Removal | Yes           | None    | None    | 5              | 0              | 2              | STF - Due to original support under design, fixes implemented May/June 1979   |
| 59      | Residual Heat Removal | Yes           | None    | None    | 5              | 0              | 0              |   |
| 60      | Residual Heat Removal | Yes           | None    | None    | 8              | 0              | 0              |   |
| 61      | Residual Heat Removal | Yes           | None    | None    | 11             | 3              | 0              |   |
| 87      | Nuclear Steam System  | Yes           | None    | None    | 5              | 0              | 1              | STF - Due to original support under design, fixes implemented May/June 1979   |
| 120     | Nuclear Steam System  | Yes           | None    | None    | 6              | 0              | 1              | STF - Due to original support under design, fixes implemented May/June 1979   |
| 123     | Nuclear Steam System  | Yes           | None    | None    | 8              | 1              | 2              | STF - Due to original support under design, fixes implemented May/June 1979   |
| 124     | Nuclear Steam System  | Yes           | None    | None    | 14             | 0              | 2              | STF - Due to original support under design, fixes implemented May/June 1979   |
| 126     | Nuclear Steam System  | Yes           | None    | None    | 10             | 2              | 2              | STF - Due to original support under design, fixes implemented May/June 1979   |
| 128     | Nuclear Steam System  | -             | Yes     | None    | 15             | 0              | 0              | LTF - Add 2 Supports - Formal evaluation of as-built vs as-analyzed/designed configuration discrepancies to be completed. |
| 168     | Residual Heat Removal | Yes           | None    | None    | 25             | 1              | 0              |   |
| 173     | Residual Heat Removal | Yes           | None    | None    | 12             | 0              | 0              |   |

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NRC IE 79-07 RE-EVALUATION SUMMARY

| ISO<br>NO.                  | SYSTEM                             | PIPE STRESSES |         |         | SUPPORT LOADS  |                |                | REMARK  |
|-----------------------------|------------------------------------|---------------|---------|---------|----------------|----------------|----------------|---|
|                             |                                    | ACC (1)       | LIF (2) | STF (3) | ACC (1)<br>NO. | LIF (2)<br>NO. | STF (3)<br>NO. |   |
| 187                         | Nuclear Steam System               | Yes           | None    | None    | 8              | 2              | 0              |   |
| 194                         | Reactor Core Isolation<br>Coolant  | Yes           | None    | None    | 5              | 0              | 0              |   |
| 196                         | Reactor Core Isolation<br>Coolant  | Yes           | None    | None    | 1              | 1              | 0              |   |
| 199                         | Residual Heat Removal              | Yes           | None    | None    | 4              | 1              | 0              |   |
| 524                         | Core Spray                         | Yes           | None    | None    | 8              | 0              | 0              |   |
| 605                         | Residual Heat Removal              | Yes           | None    | None    | 31             | 3              | 0              |   |
| 606                         | Service Water                      | Yes           | None    | None    | 14             | 1              | 0              |   |
| <u>PRIORITY CATEGORY II</u> |                                    |               |         |         |                |                |                |   |
| 7                           | Nuclear Steam System               | Yes           | None    | None    | 9              | 0              | 0              |   |
| 9                           | High Pressure Coolant<br>Injection | Yes           | None    | None    | 12             | 0              | 0              |   |
| 18                          | Core Spray                         | Yes           | None    | None    | 7              | 0              | 0              |   |
| 19                          | Core Spray                         | Yes           | None    | None    | 0              | 4              | 0              |   |
| 20                          | Core Spray                         | Yes           | None    | None    | 5              | 1              | 0              |   |
| 23                          | Core Spray                         | Yes           | None    | None    | 7              | 1              | 0              |   |
| 26                          | Core Spray                         | Yes           | None    | None    | 4              | 2              | 0              |   |
| 31                          | Residual Heat Removal              | Yes           | None    | None    | 7              | 4              | 1              | STF - Due to original support under design,<br>fixes implemented May/June 1979. |

## ATTACHMENT 3

## NRC IE 79-07 RE-EVALUATION SUMMARY

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| ISO<br>NO. | SYSTEM                               | PIPE STRESSES |        |        | SUPPORT LOADS |               |               | REMARK |
|------------|--------------------------------------|---------------|--------|--------|---------------|---------------|---------------|--------|
|            |                                      | ACC(1)        | LIF(2) | STF(3) | ACC(1)<br>NO. | LIF(2)<br>NO. | STF(3)<br>NO. |        |
| 40         | Core Spray                           | Yes           | None   | None   | 1             | 1             | 0             |        |
| 43         | Residual Heat Removal                | Yes           | None   | None   | 4             | 0             | 0             |        |
| 44         | Residual Heat Removal                | Yes           | None   | None   | 0             | 0             | 0             |        |
| 45         | Residual Heat Removal                | Yes           | None   | None   | 7             | 1             | 0             |        |
| 46         | Residual Heat Removal                | Yes           | None   | None   | 9             | 3             | 0             |        |
| 47         | Residual Heat Removal                | Yes           | None   | None   | 6             | 1             | 0             |        |
| 48         | Residual Heat Removal                | Yes           | None   | None   | 12            | 0             | 0             |        |
| 51         | Residual Heat Removal                | Yes           | None   | None   | 0             | 0             | 0             |        |
| 53         | High Pressure Coolant In-<br>jection | Yes           | None   | None   | 5             | 1             | 0             |        |
| 54         | Residual Heat Removal                | Yes           | None   | None   | 6             | 1             | 0             |        |
| 55         | Residual Heat Removal                | Yes           | None   | None   | 11            | 0             | 0             |        |
| 56         | Residual Heat Removal                | Yes           | None   | None   | 14            | 2             | 0             |        |
| 57         | Residual Heat Removal                | Yes           | None   | None   | 6             | 0             | 0             |        |
| 58         | Residual Heat Removal                | Yes           | None   | None   | 6             | 0             | 0             |        |
| 65         | Residual heat Removal                | Yes           | None   | None   | 3             | 3             | 0             |        |
| 146        | High Pressure Coolant                | Yes           | None   | None   | 12            | 1             | 0             |        |
| 609        | Service Water                        | Yes           | None   | None   | 9             | 4             | 0             |        |

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## NRC IE 79-07 RE-EVALUATION SUMMARY

## PRIORITY CATEGORY III

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| ISO NO. | SYSTEM                         | PIPE STRESSES |         |         | SUPPORT LOADS  |                |                | REMARK   |
|---------|--------------------------------|---------------|---------|---------|----------------|----------------|----------------|--|
|         |                                | ACC (1)       | LTF (2) | STF (3) | ACC (1)<br>NO. | LTF (2)<br>NO. | STF (3)<br>NO. |  |
| 12      | Reactor Core Isolation Coolant | Yes           | None    | None    | 14             | 5              | 1              | STF - Due to original support under design, fixes implemented May/June 1979  |
| 33      | Reactor Core Isolation Coolant | Yes           | None    | None    | 14             | 0              | 0              |  |
| 34      | Reactor Core Isolation Coolant | Yes           | None    | None    | 3              | 0              | 0              |  |
| 35      | Reactor Core Isolation Coolant | Yes           | None    | None    | 7              | 1              | 0              |  |
| 49      | Reactor Core Isolation Coolant | Yes           | None    | None    | 4              | 3              | 0              |  |
| 50      | Reactor Core Isolation Coolant | Yes           | None    | None    | 4              | 0              | 0              |  |
| 63      | Reactor Core Isolation Coolant | Yes           | None    | None    | 5              | 2              | 0              | STF - Due to original support under design, fixes implemented May/June 1979. |
| 66      | Reactor Core Isolation Coolant | Yes           | None    | None    | 9              | 0              | 0              |  |
| 67      | Reactor Core Isolation Coolant | Yes           | None    | None    | 6              | 1              | 0              |  |
| 535     | Reactor Core Isolation Coolant | Yes           | None    | None    | 7              | 0              | 2              |  |
| 549     | Reactor Core Isolation Coolant | Yes           | None    | None    | 6              | 1              | 0              |  |
| 563     | Reactor Core Isolation Coolant | Yes           | None    | None    | 8              | 0              | 0              |  |
| 568     | Reactor Core Isolation Coolant | Yes           | None    | None    | 9              | 2              | 0              |  |

467 017

## ATTACHMENT 3

## NRC IE 79-07 RE-EVALUATION SUMMARY

## PRIORITY CATEGORY IV

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| ISO NO. | SYSTEM                | PIPE STRESSES |         |         | SUPPORT LOADS |             |             | REMARK  |
|---------|-----------------------|---------------|---------|---------|---------------|-------------|-------------|---|
|         |                       | ACC (1)       | LTF (2) | STF (3) | ACC (1) NO.   | LTF (2) NO. | STF (3) NO. |   |
| 29      | Residual Heat Removal | Yes           | None    | None    | 6             | 1           | 0           |   |
| 30      | Residual Heat Removal | Yes           | None    | None    | 14            | 0           | 0           |   |
| 62      | Service Water         | Yes           | None    | None    | 10            | 2           | 1           | STF - Due to original support under design, fixes implemented May/June 1979 |
| 85      | Residual Heat Removal | Yes           | None    | None    | 5             | 1           | 0           |   |
| 86      | Residual Heat Removal | Yes           | None    | None    | 8             | 2           | 0           |   |
| 109     | Service Water         | Yes           | None    | None    | 9             | 3           | 1           | STF - Due to original support under design, fixes implemented May/June 1979 |
| 110     | Service Water         | Yes           | None    | None    | 27            | 0           | 0           |   |
| 142     | Service Water         | Yes           | None    | None    | 12            | 0           | 0           |   |
| 162     | Service Water         | Yes           | None    | None    | 10            | 0           | 0           |   |
| 163     | Service Water         | Yes           | None    | None    | 0             | 0           | 0           |   |
| 217     | Service Water         | Yes           | None    | None    | 15            | 0           | 0           |   |
| 662     | Service Water         | Yes           | None    | None    | 5             | 0           | 0           |   |

## PRIORITY CATEGORY V

|     |                                 |     |      |      |    |   |   |  |
|-----|---------------------------------|-----|------|------|----|---|---|--|
| 8   | Nuclear Steam System            | -   | Yes  | None | 16 | 4 | 0 | LTF - Due to valve operator eccentricity |
| 92  | RCIC Misc. Lines @ Turbine      | Yes | None | None | 2  | 0 | 0 |  |
| 132 | Reactor Water Cleanup Sys.      | Yes | None | None | 15 | 2 | 0 |  |
| 151 | High Pressure Coolant Injection | Yes | None | None | 17 | 0 | 0 |  |
| 153 | High Pressure Coolant Injection | Yes | None | None | 0  | 2 | 0 |  |

467 018

## NRC IE 79-07 RE-EVALUATION SUMMARY

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| ISO NO. | SYSTEM                          | PIPE STRESSES |         |         | SUPPORT LOADS  |                |                | REMARK  |
|---------|---------------------------------|---------------|---------|---------|----------------|----------------|----------------|---|
|         |                                 | ACC (1)       | LTF (2) | STF (3) | ACC (1)<br>NO. | LTF (2)<br>NO. | STF (3)<br>NO. |   |
| 156     | High Pressure Coolant Injection | Yes           | None    | None    | 13             | 1              | 0              |   |
| 157     | High Pressure Coolant Injection | Yes           | None    | None    | 8              | 1              | 0              |   |
| 159     | High Pressure Coolant Injection | Yes           | None    | None    | 1              | 2              | 0              |   |
| 161     | Reactor Core Isolation Cooling  | -             | Yes     | None    | 11             | 1              | 0              | LTF - Due to valve operator eccentricity                                    |
| 164     | Reactor Core Isolation Cooling  | Yes           | None    | None    | 9              | 0              | 0              |   |
| 170     | Residual Heat Removal           | Yes           | None    | None    | 2              | 0              | 0              |   |
| 171     | Residual Heat Removal           | Yes           | None    | None    | 6              | 0              | 0              |   |
| 172     | Residual Heat Removal           | Yes           | None    | None    | 6              | 1              | 0              |   |
| 195     | Reactor Core Isolation Cooling  | Yes           | None    | None    | 1              | 0              | 0              |   |
| 607     | Service Water                   | Yes           | None    | None    | 9              | 3              | 2              | STF - Due to original support under design, fixes implemented May/June 1979 |
| 608     | Service Water                   | Yes           | None    | None    | 17             | 3              | 0              |   |
| 657     | High Pressure Coolant Injection | -             | Yes     | None    | 8              | 1              | 0              | LTF - Due to valve operator eccentricity                                    |

## NRC IE 79-07 RE-EVALUATION SUMMARY

## PRIORITY CATEGORY VI

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| ISO NO. | SYSTEM                | PIPE STRESSES |         |         | SUPPORT LOADS |             |             | REMARK  |
|---------|-----------------------|---------------|---------|---------|---------------|-------------|-------------|---|
|         |                       | ACC (1)       | LTF (2) | STF (3) | ACC (1) NO.   | LTF (2) NO. | STF (3) NO. |   |
| 64      | Residual Heat Removal | Yes           | None    | None    | 9             | 0           | 0           |   |
| 138     | Fuel Pool Cooling     | Yes           | None    | None    | 14            | 1           | 0           |   |
| 139     | Fuel Pool Cooling     | Yes           | None    | None    | 10            | 1           | 0           |   |
| 144     | Fuel Pool Cooling     | Yes           | None    | None    | 8             | 1           | 1           | STF - Due to original support under design, fixes implemented May/June 1979 |
| 145     | Fuel Pool Cooling     | Yes           | None    | None    | 15            | 3           | 0           |   |
| 148     | Fuel Pool Cooling     | Yes           | None    | None    | 3             | 1           | 0           |   |
| 149     | Fuel Pool Cooling     | Yes           | None    | None    | 5             | 8           | 0           |   |
| 150     | Standby Gas Treatment | Yes           | None    | None    | 12            | 1           | 2           | STF - Due to original support under design, fixes implemented May/June 1979 |
| 160     | Feedwater             | Yes           | None    | None    | 14            | 1           | 1           | STF - Due to original support under design, fixes implemented May/June 1979 |
| 166     | Core Spray            | Yes           | None    | None    | 4             | 3           | 0           |   |
| 174     | Instrument Air System | Yes           | None    | None    | 11            | 0           | 0           |   |
| 175     | Instrument Air System | Yes           | None    | None    | 37            | 4           | 1           | STF - Due to original support under design, fixes implemented May/June 1979 |
| 176     | Instrument Air System | Yes           | None    | None    | 10            | 0           | 0           |   |
| 177     | Instrument Air System | Yes           | None    | None    | 36            | 3           | 0           | LTF - Due to support load carrying capability                               |
| 178     | Instrument Air System | Yes           | None    | None    | 16            | 0           | 0           |   |
| 180     | Instrument Air System | Yes           | None    | None    | 13            | 2           | 0           | LTF - Due to support load carrying capability                               |
| 182     | Instrument Air System | Yes           | None    | None    | 6             | 0           | 0           |   |
| 183     | Instrument Air System | Yes           | None    | None    | 13            | 0           | 0           |   |
| 186     | Instrument Air System | Yes           | None    | None    | 12            | 0           | 0           |   |

467 020

## NRC IE 79-07 RE-EVALUATION SUMMARY

| ISO NO. | SYSTEM                          | PIPE STRESSES |         |         | SUPPORT LOADS |             |             | REMARK  |
|---------|---------------------------------|---------------|---------|---------|---------------|-------------|-------------|---|
|         |                                 | ACC (1)       | LTF (2) | STF (3) | ACC (1) NO.   | LTF (2) NO. | STF (3) NO. |   |
| 202     | Instrument Air System           | Yes           | None    | None    | 16            | 1           | 0           |   |
| 209     | Containment Atmospheric Control | Yes           | None    | None    | 4             | 0           | 0           |   |
| 210     | Containment Atmospheric Control | Yes           | None    | None    | 4             | 1           | 0           |   |
| 213     | Containment Atmospheric Control | -             | Yes     | None    | 31            | 0           | 0           | LTF - Formal evaluation of as-built vs. as-analyzed/designed configuration discrepancies to be completed. |
| 214     | Service Water                   | Yes           | None    | None    | 5             | 2           | 0           |   |
| 215     | Service Water                   | -             | Yes     | None    | 4             | 2           | 0           | LTF - Formal evaluation of as-built vs. as-analyzed/designed configuration discrepancies to be completed. |
| 216     | Service Water                   | Yes           | None    | None    | 15            | 0           | 0           |   |
| 218     | Service Water                   | Yes           | None    | None    | 8             | 0           | 0           |   |
| 231     | Instrument Air System           | Yes           | None    | None    | 18            | 0           | 0           |   |
| 232     | Instrument Air System           | Yes           | None    | None    | 18            | 0           | 0           |   |
| 233     | Instrument Air System           | Yes           | None    | None    | 16            | 0           | 0           |   |
| 306     | Instrument Air System           | Yes           | None    | None    | 27            | 0           | 0           |   |
| 546     | Residual Heat Removal           | Yes           | None    | None    | 4             | 4           | 0           |   |
| 565     | Residual Heat Removal           | Yes           | None    | None    | 5             | 0           | 0           |   |
| 674     | Instrument Air System           | Yes           | None    | None    | 12            | 0           | 0           |   |
| 675     | Instrument Air System           | Yes           | None    | None    | 31            | 12          | 2           | STF - Due to original support under design, fixes implemented May/June 1979                               |

## NRC IE 79-07 RE-EVALUATION SUMMARY

| ISO NO.            | SYSTEM                          | PIPE STRESSES |         |         | SUPPORT LOADS  |                |                | REMARK  |
|--------------------|---------------------------------|---------------|---------|---------|----------------|----------------|----------------|---|
|                    |                                 | ACC (1)       | LIF (2) | STF (3) | ACC (1)<br>NO. | LTF (2)<br>NO. | STF (3)<br>NO. |   |
| 677                | Instrument Air System           | Yes           | None    | None    | 36             | 6              | 2              | STF - Due to original support under design, fixes implemented May/June 1979                               |
| 679                | Instrument Air System           | Yes           | None    | None    | 6              | 16             | 0              | LTF - Due to support load carrying capability   |
| 680                | Instrument Air System           | Yes           | None    | None    | 14             | 1              | 0              | LTF - Due to support load carrying capability   |
| 681                | Instrument Air System           | Yes           | None    | None    | 31             | 0              | 0              |   |
| 682                | Instrument Air System           | Yes           | None    | None    | 14             | 2              | 0              | LTF - Due to support load carrying capability   |
| 691                | Instrument Air System           | Yes           | None    | None    | 3              | 0              | 0              |   |
| 713                | Containment Atmospheric Control | -             | Yes     | None    | 34             | 7              | 0              | LTF - Formal evaluation of as-built vs. as-analyzed/designed configuration discrepancies to be completed. |
| <u>ORIGINAL 10</u> |                                 |               |         |         |                |                |                |   |
| 6                  | Residual Heat Removal           | Yes           | None    | None    | 3              | 0              | 0              |   |
| 15B                | Nuclear Steam System            | Yes           | None    | None    | 7              | 1              | 0              |   |
| 16                 | Feedwater                       | Yes           | None    | None    | 14             | 2              | 0              |   |
| 17                 | High Pressure Coolant Injection | Yes           | None    | None    | 9              | 0              | 0              |   |
| 24                 | Core Spray                      | Yes           | None    | None    | 1              | 1              | 0              |   |
| 121                | Nuclear Steam System            | Yes           | None    | None    | 5              | 0              | 2              | STF - Due to original support under design, fixes implemented May/June 1979                               |
| 122                | Nuclear Steam System            | Yes           | None    | None    | 4              | 0              | 3              | STF - Due to original support under design, fixes implemented May/June 1979                               |
| 125                | Nuclear Steam System            | Yes           | None    | None    | 11             | 0              | 1              | STF - Due to original support under design, fixes implemented May 1979                                    |

## NRC IF 79-07 RE-EVALUATION SUMMARY

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| ISO NO.      | SYSTEM                          | PIPE STRESSES |         |         | SUPPORT LOADS |             |             | REMARK   |
|--------------|---------------------------------|---------------|---------|---------|---------------|-------------|-------------|--|
|              |                                 | ACC (1)       | LTF (2) | STF (3) | ACC (1) NO.   | LTF (2) NO. | STF (3) NO. |  |
| 237          | Nuclear Steam System            | Yes           | None    | None    | 4             | 3           | 2           | STF - Due to original support under design, fixes implemented May/June 1979<br>STF - Due to original support under design, fixes implemented May/June 1979 |
| 510          | High Pressure Coolant Injection | Yes           | None    | None    | 14            | 5           | 3           |  |
| NRC PRIORITY |                                 |               |         |         |               |             |             |  |
| 14A          | Nuclear Steam System            | Yes           | None    | None    | 6             | 0           | 0           | STF - Due to original support under design, fixes implemented May/June 1979  |
| 39           | Core Spray                      | Yes           | None    | None    | 1             | 1           | 1           |  |
| 82           | Service Water                   | Yes           | None    | None    | 12            | 2           | 1           | STF - Due to original support under design, fixes implemented May/June 1979  |
| 83           | Service Water                   | Yes           | None    | None    | 17            | 1           | 0           | STF - Due to original support under design, fixes implemented May/June 1979  |
| 84           | Service Water                   | Yes           | None    | None    | 8             | 1           | 2           |  |
| 105          | Core Spray                      | Yes           | None    | None    | 35            | 3           | 0           |  |
| 106          | Service Water                   | Yes           | None    | None    | 15            | 2           | 0           |  |
| 107          | Service Water                   | Yes           | None    | None    | 11            | 3           | 2           | STF - Due to original support under design, fixes implemented May/June 1979  |
| 108          | Service Water                   | Yes           | None    | None    | 20            | 2           | 0           |  |
| 119          | Nuclear Steam System            | Yes           | None    | None    | 11            | 0           | 0           | STF - Due to original support under design, fixes implemented May/June 1979  |
| 127          | Nuclear Steam System            | Yes           | None    | None    | 3             | 2           | 1           |  |
| 152          | High Pressure Coolant Injection | Yes           | None    | None    | 3             | 4           | 0           |  |
| 154          | High Pressure Coolant Injection | Yes           | None    | None    | 14            | 0           | 0           |  |

467 023

## NRC IE 79-07 RE-EVALUATION SUMMARY

| ISO<br>NO. | SYSTEM                          | PIPE STRESSES |         |         | SUPPORT LOADS  |                |                | REMARK  |
|------------|---------------------------------|---------------|---------|---------|----------------|----------------|----------------|---|
|            |                                 | ACC (1)       | LTF (2) | STF (3) | ACC (1)<br>NO. | LTF (2)<br>NO. | STF (3)<br>NO. |   |
| 155        | High Pressure Coolant Injection | Yes           | None    | None    | 6              | 2              | 0              |   |
| 158        | High Pressure Coolant Injection | Yes           | None    | None    | 15             | 0              | 0              |   |
| 179        | Instrument Air System           | Yes           | None    | None    | 17             | 2              | 0              |   |
| 181        | Instrument Air System           | Yes           | None    | None    | 29             | 1              | 0              |   |
| 184        | Instrument Air System           | Yes           | None    | None    | 8              | 1              | 0              |   |
| 185        | Instrument Air System           | Yes           | None    | None    | 5              | 0              | 0              |   |
| 188        | Instrument Air System           | Yes           | None    | None    | 7              | 0              | 0              |   |
| 189        | Instrument Air System           | Yes           | None    | None    | 3              | 3              | 0              | LTF - Due to support load carrying capability |
| 190        | Instrument Air System           | Yes           | None    | None    | 0              | 28             | 0              | LTF - Due to support load carrying capability |
| 191        | Instrument Air System           | Yes           | None    | None    | 3              | 0              | 0              |   |
| 192        | Instrument Air System           | Yes           | None    | None    | 4              | 1              | 0              |   |
| 193        | Instrument Air System           | Yes           | None    | None    | 4              | 1              | 0              | LTF - Due to support load carrying capability |
| 201        | Instrument Air System           | Yes           | None    | None    | 13             | 0              | 0              |   |
| 206        | Instrument Air System           | Yes           | None    | None    | 7              | 3              | 0              | LTF - Due to support load carrying capability |
| 207        | Instrument Air System           | Yes           | None    | None    | 12             | 2              | 0              | LTF - Due to support load carrying capability |
| 211        | Containment Atmospheric Control | Yes           | None    | None    | 2              | 0              | 0              |   |
| 212        | Containment Atmospheric Control | Yes           | None    | None    | 3              | 3              | 0              |   |

ATTACHMENT 3

NRC IE 79-07 RE-EVALUATION SUMMARY

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| ISO<br>NO.    | SYSTEM  | PIPE STRESSES |            |            | SUPPORT LOADS |            |            | REMARK  |
|---------------|---|---------------|------------|------------|---------------|------------|------------|---|
|               |   | ACC<br>(1)    | LTF<br>(2) | STF<br>(3) | ACC<br>NO     | LTF<br>NO. | STF<br>NO. |   |
| 230           | Containment Venting   | Yes           | None       | None       | 4             | 2          | 0          |   |
| 545           | Residual Heat Removal   | Yes           | None       | None       | 8             | 0          | 0          |   |
| 547           | Residual Heat Removal   | Yes           | None       | None       | 7             | 1          | 0          |   |
| 548           | Residual Heat Removal   | Yes           | None       | None       | 8             | 1          | 0          |   |
| 690           | Instrument Air System   | Yes           | None       | None       | 0             | 27         | 0          |   |
| 709           | Containment Atmospheric Control   | Yes           | None       | None       | 3             | 0          | 0          |   |
| 710           | Containment Atmospheric Control   | Yes           | None       | None       | 12            | 4          | 1          | STF - Due to original support under design, fixes implemented May/June 1979 |
| 716           | Service Water   | Yes           | None       | None       | 15            | 0          | 0          |   |
| <u>NOTES:</u> |   |               |            |            |               |            |            |   |
| (1)           | ACC - Acceptable - stresses/loads within FSAR and/or original criteria allowables   |               |            |            |               |            |            |   |
| (2)           | LTF - Long Term Fix - indicates the fix may be made at the next scheduled refueling outage because it has been determined, that though overstressed by FSAR criteria, structural integrity can be maintained. |               |            |            |               |            |            |   |
| (3)           | STF - Short Term Fix - indicates the fix should be made immediately because it has been determined that structural integrity cannot be maintained in the overstressed pipe or pipe support.                   |               |            |            |               |            |            |   |

467 025

ATTACHMENT NO. 4  
SUMMARY OF COMMITMENTS

| <u>COMMITMENT</u>  | <u>STATUS</u>  |
|--|--|
| Reanalyze all safety-related piping within approximately 13 weeks of NRC approval of reanalyses criteria.        | Completed with this transmittal.   |
| Provide interim reports of reanalysis.   | Transmitted in CP&L letters of May 15, May 21, June 4 and July 3.  |
| Verify as-built versus as analyzed conditions.   | Completed as reported in CP&L letter of July 3.  |
| Provide guidelines for determining if reanalysis is necessary due to as-built discrepancies.                     | Provided in CP&L letter of May 21.   |
| Comply with IE Bulletin 79-02.   | Completed as reported in CP&L letter of July 12, 1979.   |
| Comply with IE Bulletin 79-04.   | Completed as reported in CP&L letter of April 30, 1979.  |
| Report any lines with calculated stresses over allowable within 24 hours.  | Three lines (total) reported to NRC - NRR and IE by telephone June 22.   |
| Report within 24 hours any systems that do not maintain structural integrity due to pipe support being stressed. | CP&L telephone calls of July 2 and July 6 reported three supports that had calculated overstresses. Affected supports were promptly modified.  |
| Reanalyze all pipe supports using recalculated seismic loads.  | Completed with this submittal.   |
| Comply with IE Bulletin 79-07.   | Completed with this submittal, prior submittals, and as-built verification.  |
| Comply with IE Bulletin 79-14.   | Completed with this and prior submittals, and as-built verification.   |
| Be prepared to discuss valve operator eccentricity.  | Categories 3, 4, 5 and 6 were reanalyzed with eccentricity incorporated. Categories 1 and 2 are presently being re-evaluated on basis of eccentricity. If any lines are determined to be overstressed, NRC will be notified within 24 hours, and results will be submitted to NRC. |
| Provide ADLPIPE listings, benchwork piping problems and PISYS Listing.   | Provided at May 21, 1979 meeting with NRC.   |