NRR-PMDAPEm Resource

From: Clark, Jeffrey S.:(GenCo-Nuc) [Jeffrey.Clark2@exeloncorp.com]
Sent: Wednesday, March 18, 2015 5:23 PM
To: DiFrancesco, Nicholas
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Subject: RE: Inquiry RE: Dresden ESEP Report Clarifications
Attachments: Response to USNRC Questions for Dresden ESEP Report FINAL 3-18-15.docx

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Mr. DiFrancesco,

In response to your email below, Exelon is pleased to provide you with the attached responses to your questions. Please feel free to contact us with any further questions or clarifications needed to support the NRC's ESEP report reviews.

Thank You,

Jeff Clark

Jeffrey S. Clark, PE

Fukushima Response Seismic Lead
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From: DiFrancesco, Nicholas [mailto:Nicholas.DiFrancesco@nrc.gov]
Sent: Tuesday, March 03, 2015 2:20 PM
To: Clark, Jeffrey S.:(GenCo-Nuc)
Cc: Wyman, Stephen; Distel, David J:(GenCo-Nuc); Devlin-Gill, Stephanie
Subject: Inquiry RE: Dresden ESEP Report Clarifications

Mr. Clark,

In follow-up to our afternoon discussion, as part of the NRC review of the Dresden ESEP report, the staff would appreciate clarification on the following technical items:

Question 1

ESEP Report Section 6.4 "HCLPF Calculation Process", states: "ESEP equipment items which are beyond 40 feet above grade are located in the Reactor Building (RB) at elevation 570 feet and 589 feet. The 5% damped horizontal response spectra at these elevations are documented in 14Q4239-CAL-001 [10]. The maximum spectral peaks at these locations are 4.23g (E-W direction) and 6.83g (E-W direction) and well above the lane 2 bound applicable to floor response spectra of 1.5 * 1.2g = 1.8g. The maximum ZPA at these elevations were 1.19g and 1.42g respectively. This presented screening challenges that were addressed as discussed in the notes section of Attachment C and D."

The staff interpreted this to mean that no screening beyond 40 feet above grade was possible, because at 570 ft and 589 ft elevations, the peak spectral accelerations (4.23g and 6.83g, respectively) exceeded the screening level (1.8g); and that for all components on the ESEL located beyond 40 feet above grade, a HCLPF calculation maybe necessary.

1) Please confirm or clarify the staff's interpretation.
2) Describe how Dresden performed the capacity screening of ESEL components located beyond 40 ft above grade.
3) If generic data or test spectra such as GERS are used to estimate component capacity, please describe how the seismic demands for these components were estimated and their associated technical basis.

Question 2 (Section III "Selection of the Equipment List")

Please clarify if the components necessary to indicate the wide range reactor pressure vessel water level were included in the ESEL or discuss why they do not need to be included in the ESEL.

An email response will likely be sufficient to support the ESEP report review. A response around March 18, if practicable, would be greatly appreciated to support the planned review schedule.

Please let me or Steve Wyman (at 301-415-3041) know if you would like to schedule a clarification call or any have questions and concerns.

Thanks,

Nick

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Exelon Response to USNRC Questionsfor Dresden ESEP Report

In response to the email request dated March 3, 2015 from the USNRC's Mr. Nick DiFrancesco, Exelon is pleased to provide you with the responses below. Please feel free to contact us with any further questions or clarifications needed to support the NRC's ESEP report reviews.

Question 1:

ESEP Report Section 6.4 "HCLPF Calculation Process", states: "ESEP equipment items which are beyond 40 feet above grade are located in the Reactor Building (RB) at elevation 570 feet and 589 feet. The 5% damped horizontal response spectra at these elevations are documented in 14Q4239-CAL-001. The maximum spectral peaks at these locations are 4.23g (E-W direction) and 6.83g (E-W direction) and well above the lane 2 bound applicable to floor response spectra of 1.5 * 1.2g = 1.8g. The maximum ZPA at these elevations were 1.19g and 1.42g respectively. This presented screening challenges that were addressed as discussed in the notes section of Attachment C and D."

The staff interpreted this to mean that no screening beyond 40 feet above grade was possible, because at 570 ft. and 589 ft. elevations, the peak spectral accelerations (4.23g and 6.83g, respectively) exceeded the screening level (1.8g); and that for all components on the ESEL located beyond 40 feet above grade, a HCLPF calculation maybe necessary.

1) Please confirm or clarify the staff's interpretation.
2) Describe how Dresden performed the capacity screening of ESEL components located beyond 40 ft. above grade.
3) If generic data or test spectra such as GERS are used to estimate component capacity, please describe how the seismic demands for these components were estimated and their associated technical basis.

Response to Question 1:

In response to point 1 regarding the staff's interpretation, the walkdown team and evaluators did not interpret the guidance to mean that no screening would be possible at elevations above 40' above grade. Equipment was screened on a case by case basis within the context of NP-6041-SL.

In response to point 2, in some cases GERSwere used with conservative estimates of the amplification, in other cases reasonable frequency estimates were used for components that were modified during SEP, SQUG and IPEEE efforts.When this screening methodology was used,the in-structure response spectra was less than the 1.8g screening level at the estimated first natural frequency and above. This equipment were MCC's and switchgear that were braced at the top to the wall. In some cases a

HCLPF was calculated where SPID, NP-6041-SL or other allowed screening options were exhausted.

In response to point 3, GERS were also usedwith conservative estimatesbased on the SQUG (A-46) methodologies where the applicable caveats (bounding parameters for use of GERS) were met. The details of the evaluations for equipment above 40' above grade are contained in Table 1 and 2 given below, for Units 2 and 3 respectively. These tables are an expansion of the summaries given in the ESEP Summary report.

Table 1 - Unit 2 Equipment Located Above 40' Above Grade Evaluation Summary

ESEL Item #	Equipment ID	Equipment Class	Description	Build.	EL.
80	2-7329	Low Voltage Switchgear	Bus 29	RB	570
	Description of Equipment and Evaluation: The assembly consists of 6 total cabinets (four with 4 buckets and two with 3 buckets), the 4-bucket cabinets measure 20.5" wide, 60" deep, and 92" tall; one 3-bucket cabinet measures 30" wide, 60" deep, and 92" tall and the other 3-bucket cabinet measures 18" wide, 60" deep, and 92" tall. Noted that the 2-7329 Bus 29 transformer is bolted to the East side of the assembly. The switchgear is anchored by stitch welding to the underside of the front and back at seams (on both sides of seams between cubicles. The anchorage was modified and qualified in the SEP (C. E. Ltr. to NRC dtd. 28 May 1981 from R.F. Janecek to D.M. Crutchfield, Subject: Positive Anchorage of Safety Related Electrical Equipment.). Fundamental frequency of assembly judged to be greater than 12 Hz based on the 60" depth of cabinets. A screening anchorage calculation was performed at the acceleration level at 12 Hz. and above. The limiting anchorage which was governed by the pullout capacity of embedded strap anchor used to anchor the embedded anchor and was adequate at these levels. The switchgear met the GERS caveats that has a peak spectral acceleration capacity of 2.5g > 1.702g peak in the N-S direction at EL. 570'-0" above 12 Hz. and 2.5g > 1.912g in the E-W direction at EL. 570'-0".				
115	2-83125-2-Dist	Distribution Panels	Unit 2 125 VDC Reactor Building Distribution Panel	RB	570
	Description of Equipment and Evaluation: This Distribution Panel consists of one cabinet bolted to the left end of the 2-83250-2B assembly and consists of 3 buckets. The assembly has the same anchorage for 2-83250-2B (intermittent welds at the bottom and bracing at the top). The anchorage screened due to the addition of the braces. Frequency of the braced assembly is a minimum of 15 Hz. due to the top bracing to the wall.				

Table 1 - Unit 2 Equipment Located Above 40' Above Grade Evaluation Summary					
ESEL Item #	Equipment ID	Equipment Class	Description	Build.	EL.
	This panel meets the GERS Caveats that have a capacity of 3.5g > 1.702g demand so it screens on that basis.				
	2-83250-2A	Motor Control Centers	Unit 2 250 VDC MCC 2A	RB	570
	Description of Equipment and Evaluation: Assembly consists of 10 cabinets (one with 1 bucket, two with 2 buckets and seven with 3 buckets), with three of the cabinets measuring 30" wide, 20" deep, and 90" tall; and seven measuring 20" wide, 20" deep, and 90" tall. The assembly is anchored by seven 3" welds spread across the width of the assembly. Additionally, 13 gusseted angles have been added to both the front and back of the concrete pedestal and are spaced at 18" utilizing 1/2" anchor bolts. The assembly is also braced at the top to 2-83250-2B, which is subsequently braced to the adjacent wall. Frequency of the braced assembly is a minimum of 15 Hz. Anchorage is only in shear and the peak seismic demand from the Ref. 2 spectra at 15 Hz. and above is 1.702g < 1.8g, therefore screens. Anchorage screened because without the braces and a seismic input of 1.752g the anchorage was adequate. This MCC meets the GERS Caveats for MCC's that have a capacity of 2.5g > 1.702g demand so it also screens on that basis.				
128	2-83250-2B	Motor Control Centers	Unit 2 250 VDC MCC 2B	RB	570
	Description of Equipment and Evaluation: Assembly consists of 8 cabinets (one with 2 buckets and seven with 3 buckets), with seven of them measuring 20" wide, 20" deep, and 90" tall; and one measuring 30" wide, 20" deep, and 90" tall. The assembly is bolted to the 125 VDC Distribution Panel #2 on the left side of the assembly. The assembly is anchored at the bottom with six welds across the front and eight welds across the back and on top the assembly is braced to the 2-83250-2A assembly and to the adjacent wall. Frequency of the braced assembly is a minimum of 15 Hz. Anchorage is only in shear and the peak seismic demand at 15 Hz. and above is 1.702g < 1.8g, therefore screens.This MCC meets the MCC GERS Caveats that have a capacity of 2.5g > 1.702g demand so it also screens on that basis.				
192	2-1102-A	Horizontal Pumps	2A STANDBY LIQUID CONTROL PUMP	RB	589
	Description of Equipment and Evaluation: Meets NP-6041 (Ref. 2) Table 2.4 caveats for Screening Lane 2. Relatively small pump anchored using 6 anchor bolts. Very well anchored. Pump will respond rigidly with about a 2g horizontal input based on the RLGM input. Capacity Vs. Demand and anchorage screens by inspection and engineering judgment, pump is seismically rugged.				

Table 1 - Unit 2 Equipment Located Above 40' Above Grade Evaluation Summary					
ESEL Item #	Equipment ID	Equipment Class	Description	Build.	EL.
191	2-1103	Skirt Supported Vertical Tank	2-1103 UNIT 2 STANDBY LIQUID CONTROL TANK	RB	589
	Description of Equipment and Evaluation: Tank is well supported (12' tall with 9' diameter tank anchored with 8 chairs). Each chair has a 1" diameter anchor bolt, a height from skid to bolt of 14.5", chairs made of 7x7 angles. The bolts anchored to 1/2" thick plate with dimensions of 9"x4-1/4". The tank is 12' tall and 9' in diameter with eight 1" anchor rods securing the tank to the floor. The bottom shell thickness of the tank is 0.25" and the top is 0.1875". The full weight is 46 kips. The natural frequency is considered to be rigid (> 33 Hz). The anchorage was evaluated in the design basis analysis 002316 (CQD) and was found to have a safety margin of 6.97. Note that this calculation also evaluated other failure modes, but the failure of the anchor rods is considered to be the only credible failure mode. The RLGM indicates a 1.78 factor converting the Dresden SSE to the floor RLGM. 1.78 < 6.97. The capacity far exceeds the demand, therefore, the anchorage screens for the RLGM.				
194	2-1106-A	Valves- Air Operated	2A SBLC DISCH HDR SQUIB VLV	RB	589
	Description of Equipment and Evaluation: Small valve is located on an approximately 2" nominal pipe. The valve measures 6" in diameter and 15" long. Rugged valve, screens for RLGM. The valve is part of a package on a skid that is rugged and stiff. The valve itself is a rugged component with no extended operator. Frequency of package with the valve estimated to be on the order of 20 Hz. Applying a conservative amplification for the valve of 2.0, the peak demand 2 * 2.18g = 4.36g where 2.18g is the 5% damped spectral acceleration at EL. 589' in the RB. Valve meets GERS caveats that has a peak spectral acceleration capacity of 7g > 4.36g, screens.				
193	2-1107-A	Tank - Accumulator	2A STANDBY LIQUID ACCUMULATOR	RB	589
	Description of Equipment and Evaluation: Small accumulator light weight that is U-bolted to the support. Measured 16" in height and 8" in diameter. Very well supported, screens for RLGM by inspection.				
87	2-1301-10	Valves - Motor-operated	U2 ISOL CDSR CNTAM DEMIN WTR FILL SV	RB	589
	Description of Equipment and Evaluation: Small Limitorque operator. Attached to a 4" line. 30" offset. Line well supported. Line well supported adjacent to valve but not directly adjacent to the valve in all directions. Applying a conservative amplification for the valve of 3.0, using the peak of the 5% damped				

Table 1 - Unit 2 Equipment Located Above 40' Above Grade Evaluation Summary						
ESEL Item #	Equipment ID	Equipment Class	Description		Build.	EL.
	response spectra, the peak demand 3 * 6.828g = 20.5g where 6.828g is the 5% damped peak spectral acceleration at EL. 589' in the RB. Valve Operator meets GERS caveats that have a peak spectral acceleration capacity of 22g> 20.5g. The valve yoke is short and stout and can withstand the loads from this small operator.					
89	2-1301-20	Valves - Air-operated	U2 ISOL CDSR VENT TO MN STM LINE OTBD ISOL VLV		RB	589
	Description of Equipment and Evaluation: Noted that the yoke is independently supported, this is acceptable because they the piping and yoke are supported from the same structure. Valve has a 42" offset but is well supported on all sides. The valve is well supported in all directions. Frequency of structural system around the valve estimated to be on the order of 20 Hz. Applying a conservative amplification for the valve of 2.0, the peak demand 2 * 2.18g = 4.36g where 2.18g is the 5% damped spectral acceleration at EL. 589' in the RB. Valve meets GERS caveats that has a peak spectral acceleration capacity of 7g > 4.36g, screens.					
85	2-1302	Heat Exchangers - Horizontal Saddle or Cradle Supported	Isolation Condenser assembly		RB	589
	Description of Equipment and Evaluation: Tank is supported by 8 anchor bolts into the middle concrete pedestal (noted that approximately 3 of the bolts fall nearly 2 threads shy of full thread engagement). Noted that the two outside concrete pedestals only provide vertical support and allow the equipment to freely expand laterally. Screened based on specific HCLPF analysis for this large horizontal tank. The HCLPF value is governed by the capacity of the anchor bolts attaching the saddle to the pedestal, and has a value of 0.369g as indicated in Calculation 14Q4237-CAL-004.					
88	2-1301-17	Valves - Air-operated	U2 ISOL CDSR VENT TO MN STM LINE INBD ISOL VLV		RB	589
	Description of Equipment and Evaluation: Noted that the yoke is independently supported, this is acceptable because they the piping and yoke are supported from the same structure. Valve has a 42" offset but is well supported on all sides. The valve is well supported in all directions. Frequency of structural system around the valve estimated to be on the order of 20 Hz. Applying a conservative amplification for the valve of 2.0, the peak demand 2 * 2.18g = 4.36g where 2.18g is the 5% damped spectral acceleration at EL. 589' in the RB. Valve meets GERS caveats that has a peak spectral acceleration capacity of 7g > 4.36g, screens.					
150	2-1341	Wall-Mounted Contactors, Transmitters, Power Supplies, etc.	U2 ISOLATION CDSR SHELL SIDE		RB	589

Table 1 - Unit 2 Equipment Located Above 40’ Above Grade Evaluation Summary					
ESEL Item #	Equipment ID	Equipment Class	Description	Build.	EL.
	Description of Equipment and Evaluation: Instrument mounted directly to a wall. Affixed to wall with a 3" channel bolted to the column with two 1/4" bolts cantilevered out from wall 9" and up 7". The equipment is then U-bolted to the 1.5" nominal pipe that extends the 7" up from the 3" channel (pipe welded all around) using two U-bolts. The HCLPF analysis indicated that the configuration was rigid. The transmitter is a small Rosemount transmitter that has a GERS of 10 g > 1.5g rigid response, screens. HCLPF calculated in 14Q4237-CAL-002 for the anchorage and was calculated to be 1.116g and did not control the capacity.				
90	2-4399-74	Valves - Motor-operated	U2 ISOL CDSR CLEAN DEMIN WTR FILL VLV	RB	589
	Description of Equipment and Evaluation: Valve is mounted on a 4" nominal line. 28" offset < 40” offset limitation. Valve has a small Limitorque SMB000 operator) with a maximum weight = 160 lbs. (including hand wheel) < 200 lbs limitation from Ref. 1. The piping is very well supported. Line well supported adjacent to valve but not directly adjacent to the valve in all directions. Applying a conservative amplification for the valve of 3.0, using the peak of the 5% damped response spectra, the peak demand 3 * 6.828g = 20.5g where 6.828g is the 5% damped peak spectral acceleration at EL. 589’ in the RB. Valve Operator meets GERS caveats that have a peak spectral acceleration capacity of 22g> 20.5g. The valve yoke is short and stout and can withstand the loads from this small operator. Therefore, the valve screens.				

Table 2 - Unit 3 Equipment Located Above 40’ Above Grade Evaluation Summary					
ESEL Item #	Equipment ID	Equipment Class	Description	Build.	EL.
188	3-7339	Low Voltage Switchgear	Bus 39	RB	570
	Description of Equipment and Evaluation: Assembly configuration the same as 2-7329 described above. A large structure at top braces the Switchgear and restrain lateral movement of the assembly. Anchorage modified under EC #E12-3-95-221 which braced the switchgear at the top and supported along two sides. Anchorage acceptable based on comparison to 2-7329. SRT estimated frequency to be > 12 Hz based on depth of cabinets. Switchgear meets GERS caveats that has a peak spectral acceleration capacity of 2.5g > 1.702g peak in the N-S direction at EL. 570’-0” above 12 Hz. and 2.5g > 1.912g in the E-W direction at EL. 570’-0".				
123	3-83125-3-Dist	Distribution Panels	Unit 3 125 VDC Reactor Building Distribution Panel	RB	570

Table 2 - Unit 3 Equipment Located Above 40' Above Grade Evaluation Summary					
ESEL Item #	Equipment ID	Equipment Class	Description	Build.	EL.
	Description of Equipment and Evaluation: Same as described above for 2-83125-2-Dist.				
132	3-83250-3A	Motor Control Centers	Unit 3 250 VDC MCC 3A	RB	570
	Description of Equipment and Evaluation: Assembly consists of 10 cabinets (one with 1 bucket, two with 2 buckets and seven with 3 buckets), with three of the cabinets measuring 30" wide, 20" deep, and 90" tall; and seven measuring 20" wide, 20" deep, and 90" tall. The assembly is anchored with minimum 3" welds at the corners of each cabinet and an additional 3" long weld behind cabinet B. The assembly is also braced at the top to 3-83250-3A, which is subsequently braced to the adjacent wall. Frequency of the braced assembly is a minimum of 15 Hz. Anchorage is only in shear and the peak seismic demand from the Ref. 3 spectra at 15 Hz. and above is 1.702g < 1.8g, therefore screens. This MCC meets the GERS Caveats for MCC's that have a capacity of 2.5g > 1.702g demand so it also screens on that basis.				
133	3-83250-3B	Motor Control Centers	Unit 3 250 VDC MCC 3B	RB	570
	Description of Equipment and Evaluation: Assembly consists of 8 cabinets (one with 2 buckets and seven with 3 buckets), with seven of them measuring 20" wide, 20" deep, and 90" tall; and one measuring 30" wide, 20" deep, and 90" tall. The assembly is bolted to the 125 VDC Distribution Panel #3 on the left side of the assembly. The assembly is anchored at the bottom with ten 4" or larger welds across the front and eleven 4" or larger welds across the back and on top the assembly is braced at the ends to the 3-83250-3A assembly and to the adjacent wall. Frequency of the braced assembly is a minimum of 15 Hz. Anchorage is only in shear and the peak seismic demand from the Ref. 3 spectra at 15 Hz. and above is 1.702g < 1.8g, therefore screens. This MCC meets the MCC GERS Caveats that have a capacity of 2.5g > 1.702g demand so it also screens on that basis.				
198	3-1102-A	Horizontal Pumps	3A STANDBY LIQUID CONTROL PUMP	RB	589
	Description of Equipment and Evaluation: Same as described above for 2-1102-A.				
197	3-1103	Skirt Supported Vertical Tank	3-1103 UNIT 3 STANDBY LIQUID CONTROL TANK	RB	589
	Description of Equipment and Evaluation: Same as described above for 2-1103.				
200	3-1106-A	Valves- Air Operated	3A SBLC DISCH HDR SQUIB VLV	RB	589

Table 2 - Unit 3 Equipment Located Above 40' Above Grade Evaluation Summary					
ESEL Item #	Equipment ID	Equipment Class	Description	Build.	EL.
	Description of Equipment and Evaluation: Same as described above for 2-1106-A				
199	3-1107-A	Tank - Accumulator	3A STANDBY LIQUID ACCUMULATOR	RB	589
	Description of Equipment and Evaluation: Same as described above for 2-1107-A.				
99	3-1301-10	Valves - Motor-operated	U3 ISOL CDSR CNTAM DEMIN WTR FILL SV	RB	589
	Description of Equipment and Evaluation: Same as described above for 2-1301-10.				
100	3-1301-17	Valves - Air-operated	U3 ISOL CDSR VENT TO MN STM LINE INBD ISOL VLV	RB	589
	Description of Equipment and Evaluation: Same as described above for 2-1301-17.				
101	3-1301-20	Valves - Air-operated	U3 ISOL CDSR VENT TO MN STM LINE OTBD ISOL VLV	RB	589
	Description of Equipment and Evaluation: Same as described above for 2-1301-20.				
97	3-1302	Heat Exchangers - Horizontal Saddle or Cradle Supported	Isolation Condenser assembly	RB	589
	Description of Equipment and Evaluation: Same as described above for 2-1302.				
170	3-1341	Wall-Mounted Contactors, Transmitters, Power Supplies, etc.	U3 ISOLATION CDSR SHELL SIDE	RB	589
	Description of Equipment and Evaluation: Same as described above for 2-1341.				
102	3-4399-74	Valves - Motor-operated	U3 ISOL CDSR CLEAN DEMIN WTR FILL VLV	RB	589
	Description of Equipment and Evaluation: Same as described above for 2-4399-74.				

Question 2(Section III "Selection of the Equipment List"):

Please clarify if the components necessary to indicate the wide range reactor pressure vessel water level were included in the ESEL or discuss why they do not need to be included in the ESEL.

Response to Question 2:

The Dresden FLEX implementation strategy is structured to maintain reactor water level within the band of the narrow range level instruments included in the ESEL. The instruments in the ESEL have sufficient range to provide adequate level indication based on the current FLEX implementation strategy.

The reactor water level instruments listed in the Dresden ESEL (2-0640-29A ""A RPV NR LVL" & 3-0640-29A "3A RPV NR LVL") indicate in a range of -60" to +60". (**Note:** These instruments have a noun name of "narrow range" / "NR" because before the Reactor Feedwater Bailey Control modifications were installed the instruments USED to read 0" to +60". The modifications expanded the instrument ranges.) These instruments were chosen for inclusion in the ESEL because they will remain powered in our FLEX implementation strategy and can be read from the Main Control Room.

The section below provides a summary of the Dresden FLEX Strategy MAAP run results which confirm the adequacy of RWL instrument ranges.

The initial MAAP runs were developed to determine how much time is available to perform actions prior to reaching Top of the Active Fuel (TAF). Based on those times FLEX strategies were developed. For example, if no operator action is taken(i.e. no Operator Actions and FLEX not implemented) it will take approximately 7-8 hours to reach TAF. Therefore, actions were developed that could be completed in less than 7-8 hours to protect the fuel. By taking the appropriate Operator Actions of initially operating HPCI until the Isolation Condenser is restored and establishing shell-side makeup to the Isolation Condenser, the MAAP analyses identified that it will take approximately 40 hours to reach TAF. The MAAP analyses also assumed NO makeup to the RPV, again to determine the time for subsequent actions. This case also shows that it will take approximately 12 hours to reach the bottom of the indicating range for the subject "Narrow Range" Reactor Water Level indicators (2-0640-29A ""A RPV NR LVL" & 3-0640-29A "3A RPV NR LVL").

The current strategy assumes high pressure makeup becomes available at about 7 hours into the event (**Note:** This is well before the 12 hours it would take for RWL to reach the lower instrument range). An initialMAAP analysis case to show this was not performed because as soon as high pressure makeup is available the reactor water level will rise and will no longer be a concern. Therefore,additional MAAP analyses are being conducted which willmore accurately depict plant response and indicate further improved minimum reactor water level assumptions and confirm the adequacy of the

ranges for thesubject instruments (2-0640-29A “”A RPV NR LVL” & 3-0640-29A “3A RPV NR LVL”)during the event assuming FLEX actions are taken.