NRR-PMDAPEm Resource

From: Clark, Jeffrey S.:(GenCo-Nuc) [Jeffrey.Clark2@exeloncorp.com]
Sent: Friday, July 24, 2015 6:15 PM
To: DiFrancesco, Nicholas
Cc: Wyman, Stephen; Shams, Mohamed; Hughey, John; Marshall, Michael; Aggarwal, Vinod K:(GenCo-Nuc); Distel, David J:(GenCo-Nuc); Behrend, Chuck L.:(GenCo-Nuc); Ho, Wing:(GenCo-Nuc); Ritter Jr, Ralph R:(GenCo-Nuc); Lonsdale, Thomas S; Dunsmuir, Steven P:(GenCo-Nuc)
Subject: [External_Sender] RE: Clarifying Questions for the Oyster Creek ESEP Report
Attachments: Oyster Creek ESEP NRC Question Response FINAL 7-24-15.docx

Mr. DiFrancesco,

In response to your initial email request below, Exelon is pleased to provide you with the attached response to your question on the Oyster Creek ESEP Report submittal. Based on our previous discussions we are providing you this information on our revised date of July 24, 2015, as accepted below. 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
630-657-3876 (Work)
224-419-1450 (cell)

From: DiFrancesco, Nicholas [mailto:Nicholas.DiFrancesco@nrc.gov]
Sent: Monday, July 13, 2015 7:40 AM
To: Clark, Jeffrey S.:(GenCo-Nuc)
Cc: Wyman, Stephen; Shams, Mohamed; Hughey, John
Subject: [EXTERNAL] RE: Clarifying Questions for the Oyster Creek ESEP Report

Jeff,

Understand that this request will require additional time. Appreciate the update.

Thanks,
Nick

From: Clark, Jeffrey S.:(GenCo-Nuc) [mailto:Jeffrey.Clark2@exeloncorp.com]
Sent: Friday, July 10, 2015 5:57 PM
To: DiFrancesco, Nicholas; Wyman, Stephen
Cc: Devlin-Gill, Stephanie; Wyman, Stephen; Hughey, John; 50.54f_Seismic Resource; Ho, Wing:(GenCo-Nuc); Aggarwal, Vinod K:(GenCo-Nuc); Distel, David J:(GenCo-Nuc); Ritter Jr, Ralph R:(GenCo-Nuc); Gaston, Ronald:(GenCo-Nuc);

Behrend, Chuck L.:(GenCo-Nuc)
Subject: [External_Sender] RE: Clarifying Questions for the Oyster Creek ESEP Report

Mr. DiFrancesco / Mr. Wyman,
As discussed earlier in the week with Mr. DiFrancesco, the Oyster Creek response effort for the NRC question we received on June 15, 2015 (below), identified the need to perform additional seismic evaluations on 15 reactor recirculating system valves to confirm their ability to close following a Ground Motion Response Spectra (GMRS) level seismic event in support of the Oyster Creek FLEX implementation strategies. The additional effort will require approximately 2 additional weeks to resolve. Based on progress to date, we are anticipating a **July 24th, 2015** response to your question below. We apologize for the delay from our previously agreed date of July 10th, 2015. Please confirm that the revised **July 24th, 2015** completion date is acceptable.

Please feel free to call me with any additional questions you may have.

Thank You,
Jeff Clark

Jeffrey S. Clark, PE

Fukushima Response Seismic Lead
630-657-3876 (Work)
224-419-1450 (cell)

From: Clark, Jeffrey S.:(GenCo-Nuc)
Sent: Monday, June 29, 2015 4:38 PM
To: 'DiFrancesco, Nicholas'; Wyman, Stephen (Stephen.Wyman@nrc.gov)
Cc: Devlin-Gill, Stephanie; Wyman, Stephen; Hughey, John; 50.54f_Seismic Resource; Ho, Wing:(GenCo-Nuc); Aggarwal, Vinod K:(GenCo-Nuc); Distel, David J:(GenCo-Nuc); Ritter Jr, Ralph R:(GenCo-Nuc)
Subject: RE: Clarifying Questions for the Oyster Creek ESEP Report

Mr. DiFrancesco / Mr. Wyman,
Based on progress to date, we are anticipating a July 10th, 2015 response to your Oyster Creek question below. We are making good progress to date, but need some additional time due to the scope involved. We apologize for the delay from your requested date of June 30th, 2015. Please confirm that a **July 10th, 2015** target date is acceptable.

Thank You,
Jeff Clark

Jeffrey S. Clark, PE

Exelon Fukushima Response Seismic Lead
630-657-3876 (Work)
224-419-1450 (cell)

From: DiFrancesco, Nicholas [mailto:Nicholas.DiFrancesco@nrc.gov]
Sent: Monday, June 15, 2015 2:41 PM
To: Distel, David J:(GenCo-Nuc); Clark, Jeffrey S.:(GenCo-Nuc)
Cc: Devlin-Gill, Stephanie; Wyman, Stephen; Hughey, John; 50.54f_Seismic Resource
Subject: [EXTERNAL] Clarifying Questions for the Oyster Creek ESEP Report

Mr. Distel and Mr. Clark,

As mentioned, as part of the NRC review of the Oyster Creek ESEP report, the staff would appreciate clarification on the following technical items:

1. By letter dated December 19, 2014 (ADAMS Accession No. ML14353A332), Exelon Generating Company submitted the Oyster Creek Expedited Seismic Evaluation Process Report which concluded that it is not required to review all Expedited Seismic Equipment List [ESEL] components at the Ground Motion Response Spectra (GMRS) demand level. Please confirm that all components contained in Table A-1 'Oyster Creek ESEL' have demonstrated capacity at or above the GMRS demand level.

An email or letter response is sufficient to support the ESEP report review. A response around June 30, if practicable, would be greatly appreciated to support the established review schedule. An email response will be added to public ADAMS.

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

Thanks,

Nick

Senior Project Manager - Seismic Reevaluation Activities
U.S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Japan Lesson Learned Project Division
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Hearing Identifier: NRR_PMDA
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Subject: [External_Sender] RE: Clarifying Questions for the Oyster Creek ESEP Report
Sent Date: 7/24/2015 6:15:09 PM
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From: Clark, Jeffrey S.:(GenCo-Nuc)

Created By: Jeffrey.Clark2@exeloncorp.com

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Tracking Status: None

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Recipients Received:

RESPONSE TO QUESTION FROM NRC ON ESEL ITEMS MEETING GMRS

The Oyster Creek Seismic Hazard and Screening Submittal Report dated March 31, 2015 (ML14090A241) concluded that the Safe Shutdown Earthquake (SSE) envelops the Re-evaluated seismic hazard (GMRS) except at frequenciesbelow 1.9 Hz (Low Frequency exceedance), and at frequencies between 18 and 70 Hz (High Frequency exceedance).

The attached table, "Oyster Creek ESEL and Associated Seismic Evaluations", lists the seismic evaluation documents for the components on the ESEL provided in Table A-1 of the Oyster Creek ESEP Submittal Reportdated December 19, 2014 (ML14353A332). These documents demonstrate that all non-high frequency susceptible components on the ESEL have seismic capacities at or above the GMRS level, with the exception of three instrument air regulating valves (items 86, 87 and 88). These valves are not required to implement the FLEX strategies. These valves support venting of the containment which is not required based on "MAAP Analysis to Support FLEX Initial Strategy", OC-MISC-010, Rev. 1 dated June 9, 2015. The Oyster Creek FLEX strategies will be revised to exclude venting in the next 6-month update to the Overall Integrated Plan.

The only component that is susceptible to damage from low frequency spectral accelerations is the Diesel Generator Fuel Oil Storage Tank (ESEL item 43) which has been evaluated to the GMRS demand level and is documented in the Oyster Creek ESEP Submittal Report. To address the High Frequency exceedance, Exelon committed under Commitment 2 in Enclosure 2 of the Seismic Hazard and Screening submittal to perform a High Frequency Confirmation evaluation.

Since the low frequency item has been addressed in the ESEP Submittal Report, and the High Frequency exceedanceitems are being trackedwith an NRC commitment forfurther evaluation in the future, the components on the ESEL will all be considered for the GMRS seismic demand level. Further, the near endorsed DRAFT EPRI 3002004396 - HF Application Guidance states "For the High Frequency Confirmation, these types of minor exceedances over limited frequency ranges…do not represent a significant high frequency concern and can be screened from further component evaluations." Given the limited high frequency exceedance of the GMRS to the SSE, it is expected that Oyster Creek will be screened from further component evaluations.

Oyster Creek ESEL and Associated Seismic Evaluations

ESEL Item Number	Equipment		Operating State		Notes	Associated Seismic Evaluations
	ID	Description	Normal State	Desired State		
1	USS 1A2	480VAC Vital Reactor Bldg Bus A	In Service	In Service		SQUG Report[1]
2	MCC 1A21	Power to Recirculation Loop Isolation Valves	In Service	In Service		SQUG Report[1]
3	MCC 1A21A	Power to Recirculation Loop Isolation Valves	In Service	In Service		SQUG Report[1]
4	VMCC 1A2	Vital Motor Control Center 1A2	In Service	In Service		SQUG Report[1]
5	BTCHG C1	C Station Battery Solid State Static Charger C1	In Service	In Service		SQUG Report[1]
6	Battery Bank C	Vital Bank C Station Battery	In Service	In Service		SQUG Report[1]
7	DC-C 125V	125VDC Distribution Center C	In Service	In Service		SQUG Report[1]
8	DC-F	125VDC Power Panel DC-F	In Service	In Service	Isolation Condenser, Core Spray and EMRV control/logic power	SQUG Report[1]
9	DC-2 125VDC	125VDC Motor Control CTR for Reactor Building	In Service	In Service		SQUG Report[1]
10	CD-14-1B	B Isolation Condenser (NE01B)	Standby	In Service as required	Passive component	Technical Evaluation A2326264-89[6]
11	LT-IG0006B	B Isolation Condenser Shell Level XMITR	In Service	In Service	The indicator for this transmitter is located in panel 1F/2F	Technical Evaluation A2326264-87[4]
12	LI-211-1215	B Isolation Condenser Local Shell Level Indication	In Service	In Service	Mechanical instrument	Test Report[3]
13	V-14-35	B Isolation Condenser Condensate Return Valve	Closed	Open/Closed		SQUG Report[1]
14	USS 1B2	480VAC Vital Reactor Bldg Bus B	In Service	In Service		SQUG Report[1]
15	VMCC 1B2	Vital Motor Control Center 1B2	In Service	In Service		SQUG Report[1]
16	VMCC 1AB2	Vital Motor Control Center 1AB2 (Recirculation Pump Isolation Valve Power)	In Service	In Service	ATS 1AB2 is contained in VMCC 1AB2	SQUG Report[1]
17	MCC 1B21A	Power to Recirculation Loop Isolation Valves	In Service	In Service		SQUG Report[1]
18	MCC 1B21	Power to Static Charger and Recirculation Pump Isolation Valves	In Service	In Service		SQUG Report[1]
19	STATIC CHGR	A/B Station Batteries Solid State Static Charger	In Service	In Service		Technical Evaluation A2326264-87[4]

Oyster Creek ESEL and Associated Seismic Evaluations

ESEL Item Number	Equipment		Operating State		Notes	Associated Seismic Evaluations
	ID	Description	Normal State	Desired State		
20	Battery Bank B	Vital Bank B Station Battery (Lead Acid)	In Service	In Service		SQUG Report[1]
21	DC-B 125V	125VDC Distribution Panel B	In Service	In Service		SQUG Report[1]
22	DC-D	125VDC Power Panel D	In Service	In Service	Isolation Condenser, Core Spray and EMRV control/logic power	SQUG Report[1]
23	DC-1 125VDC	125VDC Isolation Valves Motor Control Center	In Service	In Service	ATS DC-1 is contained in MCC DC-1	SQUG Report[1]
24	CD-14-1A	A Isolation Condenser (NE01A)	Standby	In Service as required	Passive component	Technical Evaluation A2326264-89[6]
25	LT-IG0006A	A Isolation Condenser Shell Level XMITR	In Service	In Service	The indicator for this transmitter is located in panel 1F/2F	Technical Evaluation A2326264-87[4]
26	LI-211-1214	A Isolation Condenser Local Shell Level Indication	In Service	In Service	Mechanical Indicator	Test Report[3]
27	V-14-34	A Isolation Condenser Condensate Return Valve	Closed	Open/Closed		SQUG Report[1]
28	V-20-15	Core Spray to Reactor Parallel Valve System 1	Closed	Open	AC powered valve which will be manually operated during ELAP	SQUG Report[1]
29	RK-3	Instrument Rack 03	In Service	In Service	Contains separately powered PT-IP0007 instrument transmitter	SQUG Report[1]
30	PT-IP0007	Containment Pressure Transmitter	In Service	In Service Phase 2		Transmitter mounted on Instrument Rack 03. See SQUG Report for RK-3[1]
31	1F/2F	MCR Control Reactor & Drywell Cooling Panel	In Service	In Service		SQUG Report[1]

Oyster Creek ESEL and Associated Seismic Evaluations

ESEL Item Number	Equipment		Operating State		Notes	Associated Seismic Evaluations
	ID	Description	Normal State	Desired State		
32	5F/6F	Main Control Room Panel 5F/6F	In Service	In Service	Contains separately powered instrument indicators	SQUG Report[1]
33	RSP	Remote Shutdown Panel	In Service	In Service	Contains power supplies for, and elements of, credited instruments	SQUG Report[1]
34	16R	Containment H2/02 Panel	In Service	In Service	Monitors containment parameters	SQUG Report[1]
35	18R	Main Control Room Panel 18R Reactor Protection	In Service	In Service	Contains instruments from the IOP	SQUG Report[1]
36	11F	MCR Panel 11F	In Service	In Service	Routes power to panel 12XR via internal fuse 6F7	SQUG Report[1]
37	V-23-13	Drywell N2 Purge Valve/Containment Isolation Valve for Hardened Vent	In Service	In Service		SQUG Report[1]
38	V-23-14	Drywell N2 Purge Valve/Containment Isolation Valve for Hardened Vent	In Service	In Service		SQUG Report[1]
39	V-23-15	Torus N2 Purge Valve/Containment Isolation Valve for Hardened Vent	In Service	In Service		SQUG Report[1]
40	V-23-16	Torus N2 Purge Valve/Containment Isolation Valve for Hardened Vent	In Service	In Service		SQUG Report[1]
41	DPT-622-1009	Reactor Fuel Zone Level Wide Range I Transmitter (Channel C)	Standby	In Service	The indicator for this transmitter is located in panel 5F/6F	Technical Evaluation A2326264-87[4]
42	PT-622-1018	Reactor Wide Range Pressure Transmitter (Channel C)	Standby	In Service	The indicator for this transmitter is located in panel 5F/6F	Technical Evaluation A2326264-87[4]
43	T-39-2	Diesel Generator Fuel Oil Storage Tank	Standby	Standby	Passive Component	ESEP Submittal dated December 19, 2014 (ML14353A332)
44	V-37-09	Reactor Recirculation Pump NG01-A-Suction Isolation Valve	Open	Closed		Technical Evaluation A2326264-88[5]

Oyster Creek ESEL and Associated Seismic Evaluations

ESEL Item Number	Equipment		Operating State		Notes	Associated Seismic Evaluations
	ID	Description	Normal State	Desired State		
45	V-37-10	Reactor Recirculation Pump NG01-A Discharge Isolation Valve	Open	Closed		Technical Evaluation A2326264-88[5]
46	V-37-11	Reactor Recirculation Loop 'A' Bypass Valve NG08-A	Open	Closed		Technical Evaluation A2326264-88[5]
47	V-37-20	Reactor Recirculation Pump NG01-B Suction Isolation Valve	Open	Closed		Technical Evaluation A2326264-88[5]
48	V-37-21	Reactor Recirculation Pump NG01-B Discharge Isolation Valve	Open	Closed		Technical Evaluation A2326264-88[5]
49	V-37-22	Reactor Recirculation Loop 'B' Bypass Valve NG08-B	Open	Closed		Technical Evaluation A2326264-88[5]
50	V-37-31	Reactor Recirculation Pump NG01-C Suction Isolation Valve	Open	Closed		Technical Evaluation A2326264-88[5]
51	V-37-32	Reactor Recirculation Pump NG01-C Discharge Isolation Valve	Open	Closed		Technical Evaluation A2326264-88[5]
52	V-37-33	Reactor Recirculation Loop 'C' Bypass Valve NG08-C	Open	Closed		Technical Evaluation A2326264-88[5]
53	V-37-42	Reactor Recirculation Pump NG01-D Suction Isolation Valve	Open	Closed		Technical Evaluation A2326264-88[5]
54	V-37-43	Reactor Recirculation Pump NG01-D Discharge Isolation Valve	Open	Closed		Technical Evaluation A2326264-88[5]
55	V-37-44	Reactor Recirculation Loop 'D' Bypass Valve NG08-D	Open	Closed		Technical Evaluation A2326264-88[5]
56	V-37-53	Reactor Recirculation Pump NG01-E Suction Isolation Valve	Open	Closed		Technical Evaluation A2326264-88[5]
57	V-37-54	Reactor Recirculation Pump NG01-E Discharge Isolation Valve	Open	Closed		Technical Evaluation A2326264-88[5]
58	V-37-55	Reactor Recirculation Loop 'E' Bypass Valve NG08-E	Open	Closed		Technical Evaluation A2326264-88[5]
59	LSP-1AB2	Local Shutdown Panel	Standby	Standby	Contains elements of control for valve V-37-54	SQUG Report[1]

Oyster Creek ESEL and Associated Seismic Evaluations

ESEL Item Number	Equipment		Operating State		Notes	Associated Seismic Evaluations
	ID	Description	Normal State	Desired State		
60	3F	Panel	In Service	In Service	Contains control switches for recirculation pump valves. Valve control power provided from MCC via internal control transformer	SQUG Report[1]
61	IP-4	120V AC Vital Power Distribution Panel	In service	In service	Provides power for credited instruments	SQUG Report[1]
62	IT-4	Automatic Transfer Switch	In Service	In Service	Provides power for 120V AC vital power distribution panel IP-4	SQUG Report[1]
63	IT-4B	Transformer	In Service	In Service	Provides power for automatic transfer switch IT-4	SQUG Report[1]
64	10R	Panel	In Service	In Service	Contains power supplies for, and elements of, credited instrumentation	SQUG Report[1]
65	ER-622-080	Panel	In Service	In Service	Contains power supplies for, and elements of, credited instrumentation	SQUG Report SQ-OC-622-001[1]
66	ATS DC-D	Automatic Transfer Switch	In Service	In Service	Provides power for 125V DC distribution panel DC-D	SQUG Report[1]

Oyster Creek ESEL and Associated Seismic Evaluations

ESEL Item Number	Equipment		Operating State		Notes	Associated Seismic Evaluations
	ID	Description	Normal State	Desired State		
67	6K3A	Isolation Condenser Valve Hi Flow Isolation Logic	Energized	Energized	CR120AD042 41AA relay	Relay seismic functionality review and evaluation[2]
68	6K3B	Isolation Condenser Valve Hi Flow Isolation Logic	Energized	Energized	CR120AD042 41AA relay	Relay seismic functionality review and evaluation[2]
69	6K5A	Isolation Condenser Valve Hi Flow Isolation Logic	Energized	Energized	CR120AD042 41AA relay	Relay seismic functionality review and evaluation[2]
70	6K5B	Isolation Condenser Valve Hi Flow Isolation Logic	Energized	Energized	CR120AD042 41AA relay	Relay seismic functionality review and evaluation[2]
71	6K4A	Isolation Condenser Valve Hi Flow Isolation Logic	Energized	Energized	CR120AD042 41AA relay	Relay seismic functionality review and evaluation[2]
72	6K4B	Isolation Condenser Valve Hi Flow Isolation Logic	Energized	Energized	CR120AD042 41AA relay	Relay seismic functionality review and evaluation[2]
73	6K6A	Isolation Condenser valve Hi Flow Isolation Logic	Energized	Energized	CR120AD042 41AA relay	Relay seismic functionality review and evaluation[2]
74	6K6B	Isolation Condenser Valve Hi Flow Isolation Logic	Energized	Energized	CR120AD042 41AA relay	Relay seismic functionality review and evaluation[2]
75	6K7A	Isolation Condenser Valve Hi Flow Isolation Logic	Energized	Energized	27s Time Delay Drop-Out Relay Model 700RTC11200 U1	Relay seismic functionality review and evaluation[2]
76	6K7B	Isolation Condenser Valve Hi Flow Isolation Logic	Energized	Energized	27s Time Delay Drop-Out Relay Model 700RTC11200 U1	Relay seismic functionality review and evaluation[2]
77	6K8A	Isolation Condenser Valve Hi Flow Isolation Logic	Energized	Energized	27s Time Delay Drop-Out Relay Model 700RTC11200 U1	Relay seismic functionality review and evaluation[2]

Oyster Creek ESEL and Associated Seismic Evaluations

ESEL Item Number	Equipment		Operating State		Notes	Associated Seismic Evaluations
	ID	Description	Normal State	Desired State		
78	6K8B	Isolation Condenser Valve Hi Flow isolation logic	Energized	Energized	27s Time Delay Drop-Out Relay Model 700RTC11200 U1	Relay seismic functionality review and evaluation[2]
79	Y-6-42	Back-Up Air Supply Accumulator for Valve V-23-0013	Functional	Functional	Passive Component	Technical Evaluation A2326264-87[4]
80	Y-6-43	Back-Up Air Supply Accumulator for Valve V-23-0014	Functional	Functional	Passive Component	Technical Evaluation A2326264-87[4]
81	Y-6-44	Back-Up Air Supply Accumulator for Valve V-23-0015&16	Functional	Functional	Passive Component	Technical Evaluation A2326264-87[4]
82	V-6-953	Pilot Solenoid Air Supply Valve for V-23-0015	De-Energized	Energized		Technical Evaluation A2326264-87[4]
83	V-6-954	Pilot Solenoid Air Supply Valve for V-23-0016	De-Energized	Energized		Technical Evaluation A2326264-87[4]
84	V-6-902	Pilot Solenoid Air Supply Valve for V-23-0013	De-Energized	Energized		Technical Evaluation A2326264-87[4]
85	V-6-903	Pilot Solenoid Air Supply Valve for V-23-0014	De-Energized	Energized		Technical Evaluation A2326264-87[4]
86	V-6-950	Instrument Air Regulating Valve	Functional	Functional	McMaster-Carr Supply Co, 382M, Model: 4959K1	Not required to implement FLEX strategies[7]
87	V-6-899	Instrument Air Regulating Valve	Functional	Functional	McMaster-Carr Supply Co, 382M, Model: 4959K1	Not required to implement FLEX strategies[7]
88	V-6-898	Instrument Air Regulating Valve	Functional	Functional	Fisher Controls International LLC Model 67CFR-239	Not required to implement FLEX strategies[7]
89	CIP-3	Continuous Instrument Panel No. 3	Energized	Energized		SQUG Report[1]
90	ROTARY INVERTER	120V AC Supply for CIP-3 208/120V, 3PH, 4W	Energized	Energized		SQUG Report[1]

Oyster Creek ESEL and Associated Seismic Evaluations

ESEL Item Number	Equipment		Operating State		Notes	Associated Seismic Evaluations
	ID	Description	Normal State	Desired State		
91	12XR	Panel	In Service	In Service	Contains PNL-822-12XRCS1 Key lock bypass switch for purge valves, bypasses Isolation relays for hardened vent valves	SQUG Report[1]
92	IT-3	Automatic Transfer Switch	In Service	In Service		SQUG Report[1]

Notes:

1) “SQUG Report” denotes walkdown report prepared in accordance with the SQUG-GIP methodology. The title of the report is typically SQ-OC-(Equipment ID). The seismic demand used was based on the SSE*.

2) “Relay seismic functionality review and evaluation” denotes Report TDR 1149, Rev. 6, “Relay Seismic Functionality Review” and Calculation C-1302-900-5320-011, Rev. 5, “USI A46 Resolution Essential Relay Evaluation”. The seismic demand used was based on the SSE*.

3) “Test Report” denotes Trentec Report No.: 7T371.0, Rev. 1 associated with ECR 07-00154, Rev. 1. The seismic demand used was based on the SSE*.

4) Technical Evaluation A2326264-87: The seismic demand used was based on the GMRS*.

5) Technical Evaluation A2326264-88: The seismic demand used was based on the GMRS*.

6) Technical Evaluation A2326264-89: The seismic demand used was based on the GMRS*.

7) “Not required to implement FLEX strategies” denotes instrument air regulating valves that are not required to implement the FLEX strategies. These valves support venting of the containment which is not required based on “MAAP Analysis to Support FLEX Initial Strategy”, OC-MISC-010, Rev. 1 dated June 9, 2015. The FLEX strategies will be revised to exclude venting in the next 6-month update to the Overall Integrated Plan.

* Denotes the SSE and GMRS documented in the Oyster Creek Seismic Hazard and Screening Submittal, dated March 31, 2014 (ML14090A241).