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VIA REGULAR MAIL:  
U.S. Nuclear Regulatory Commission  
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Washington, DC 20555-0001

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U.S. Nuclear Regulatory Commission  
11555 Rockville Pike  
Rockville, MD 20852-2746

Subject: Interim Report -10CFR 21 Evaluation Regarding Potential Deficiencies in Seismic Qualifications

The purpose of this letter is to provide the NRC a report in general conformity to the requirements of 10CFR 21 Part 21.21 (a) (2).

This report is a result of NRC Inspection Report No. 99901431/2013-201 dated 20 August 2013 and Pentair Corrective Action Report (CAR 673). In general CAR 673 determined that required seismic testing was improperly performed. While the subject valve (PV-62) of CAR 673 was returned to Pentair and successfully retested, the extent of conditions review has revealed that there is a potential that additional valves may have been improperly tested.

This report is to inform the NRC of the potential 10CFR 21 evaluations and the status of the review. Pentair Valves and Controls US LP, dba Anderson Greenwood Crosby is notifying the NRC of these potentials as well as potentially affected licensees.

Required information as per 10CFR Part 21.21 (d)(4) follows:

- (i) Name and Address of the individual or individuals informing the Commission:

Brian L. Martin  
Quality Assurance Manager  
Pentair Valves and Controls US LP, dba Anderson Greenwood Crosby  
Mansfield Operations  
55 Cabot Blvd  
Mansfield, MA 02048

IE19<sub>1</sub>  
IE09  
NRO



- (ii) Identification of the facility, the activity, or basic component supplied for such facility or such activity within the United States which fails to comply or contains a defect.

Pentair has identified 93 test reports that have potential deficiencies in the seismic requirements. To date we have identified 83 assemblies, from the 93 test reports, and are continuing the process of identifying the potential additional affected valve assemblies. The following assemblies are being investigated for possible deficiencies in the seismic test requirements. In the case where a test report has multiple valve assemblies, the test report is repeated on a separate line with the corresponding assembly number.

Test Report	Assembly Number	Customer
5560	N900132	Korea Hydro Shin Kori
5517	N900008	Korea Hydro Shin Kori
5527	N900010	Korea Hydro Shin Wolsong
5414	N98432	Korea Electric Ulchin
5520	N900009	Korea Hydro Shin Kori
5528	N900011	Korea Hydro Shin Wolsong
3832	N60582	WPPS Units 3 & 5
3984	N61106	Mill Power Cherokee & Perkins
3718	N58737	Bechtel San Onofre Units 2 & 3
3719	N58737	Bechtel San Onofre Units 2 & 3
4159	N66285	Bechtel Korea Nuclear Units 7 & 8
5472	N99890	Korea Hydro Yonggwang Units 5 & 6
5487	N99965	Korea Hydro Kori Unit 1
5488	N99965	Korea Hydro Kori Unit 1
5488	N99890	Korea Hydro Yonggwang Units 5 & 6
5529	N900048	Korea Hydro Kori Units 3 & 4
5530	N900048	Korea Hydro Kori Units 3 & 4
5558	N900044	Westinghouse (AP1000)
5570	N900091	State Nuclear Sanmen
5570	N900106	State Nuclear Haiyang NPP Unit 2
5572	N900091	State Nuclear Sanmen
5572	N900106	State Nuclear Haiyang NPP Unit 2
5591	N900091	State Nuclear Sanmen
5591	N900106	State Nuclear Haiyang NPP Unit 2



5510	N900044	Westinghouse (AP1000)
4050	N62569	Georgia Power Bechtel
3807	N59180	Under Review
4175	N66089	Ontario Hydro Darlington Generating Station A
5030	N82749	Korea Electric Ulchin Units 3 & 4
5556	N900028	Westinghouse (AP1000)
5509	N900028	Westinghouse (AP1000)
5419	N97793	Korea Electric Ulchin Units 5 & 6
5518	N99825	Korea Hydro Shin Wolsong Units 1 & 2
5498	N99824	Korea Hydro Shin Kori Units 1 & 2, Korea Electric Ulchin Units 5 & 6
5498	N97793	Korea Hydro Shin Kori Units 1 & 2, Korea Electric Ulchin Units 5 & 6
3748	N59283	Taiwan Power Kyosheng Plant Units 1 & 2
3750	N59283	Taiwan Power Kyosheng Plant Units 1 & 2
3754	B59283	Taiwan Power Kyosheng Plant Units 1 & 2
3899	N59283	Taiwan Power Kyosheng Plant Units 1 & 2
4051	N59283	Taiwan Power Kyosheng Plant Units 1 & 2
5244	Under Review	Under Review
5400	Under Review	Under Review
5497	N99751	Korea Hydro Shin Kori Units 1 & 2
5515	N99798	Korea Hydro Shin Wolsong Units 1 & 2
4506	N73760	PWRPP
4506	N73762	PWRPP
4508	N73763	PWRPP
4049	N61187	Bechtel Public Service Hope Creek Units 1 & 2
3892	N59276	Taiwan Power Kyosheng Plant Units 1 & 2
4533	N73776	Weir Pump, Sizewell B Power Station
3841	N61843	Carolina Power and Light, Shearon Harris Station
3860	N44417	Under Review
4048	N61190	Bechtel Public Service Hope Creek Units 1 & 2
3850	N61843	Carolina Power and Light, Shearon Harris Station
3875	Under Review	Under Review
3749	N59277	Taiwan Power Kyosheng Plant Units 1 & 2
3798	N59149	Ebasco Florida Power & Light St. Lucie Unit 2
3819	N59148	Ebasco Florida Power & Light St. Lucie Unit 2
3839	N60908	Bechtel Public Service Hope Creek Units 1 & 2
3860	N44417	Carolina Power and Light, Shearon Harris Station
3893	N59280	Taiwan Power Kyosheng Plant Units 1 & 2
3895	N59286	Taiwan Power Kyosheng Plant Units 1 & 2
3896	N60067	Taiwan Power Kyosheng Plant Units 1 & 2
3898	N59277	Taiwan Power Kyosheng Plant Units 1 & 2
4509	N73464	PWRPP, Sizewell B Power Station
3747	N59284	Taiwan Power Kyosheng Plant Units 1 & 2
3900	N59284	Taiwan Power Kyosheng Plant Units 1 & 2



4190	N67438	Bechtel Public Service Hope Creek Units 1 & 2
3723	N60239	Southern California Edison San Onofre Units 2 & 3
3840	N59150	Ebasco Florida Power & Light St. Lucie Unit 2
3874	N60905	Bechtel Public Service Hope Creek Units 1 & 2
5244	Under Review	Under Review
3842	N60912	Bechtel Public Service Hope Creek Units 1 & 2
3894	N59281	Taiwan Power Kyosheng Plant Units 1 & 2
3897	N59287	Taiwan Power Kyosheng Plant Units 1 & 2
4510	N73765	PWRPP, Sizewell B Power Station
3879	N61188	Bechtel Public Service Hope Creek Units 1 & 2
3904	N63185	Ebasco Florida Power & Light St. Lucie Unit 2
3922	N64023	Ebasco Florida Power & Light St. Lucie Unit 2
4507	N73761	PWRPP, Sizewell B Power Station
5489	Under Review	Under Review
5490	Under Review	Under Review
5588	Under Review	Under Review
5605	Under Review	Under Review
5607	Under Review	Under Review
5611	Under Review	Under Review
5612	Under Review	Under Review
5615	Under Review	Under Review
5618	Under Review	Under Review
3887	N62933	Pennsylvania Power and Light Susquehanna Units 1 & 2
3887	N62934	Pennsylvania Power and Light Susquehanna Units 1 & 2
3901	N59288	Taiwan Power Kyosheng Plant Units 1 & 2
3902	N60518	Taiwan Power Kyosheng Plant Units 1 & 2
4179	N60901	Bechtel Public Service Hope Creek Units 1 & 2
4200	N67795	Pennsylvania Power and Light Susquehanna
4201	N66295	Bechtel Korea Electric Korea Nuclear Units 7 & 8
4271	N65602	Peerless, Washington Public Power, Unit 1

(iii) Identification of the firm constructing the facility or supplying the basic component which fails to comply or contains a defect.

Pentair Valves and Controls US LP, dba Anderson Greenwood Crosby  
 Mansfield Operations  
 55 Cabot Blvd  
 Mansfield, MA 02048

(iv) Nature of the defect or failure to comply and the safety hazard which is created or could be created by such defect or failure to comply.



In evaluating Pentair Correction Action Report (CAR 673) an extent of conditions required an evaluation of all test reports that required a static seismic load test in the least rigid axis.

The testing of valves in the incorrect axis has the potential for indeterminate functionality of the valves during a seismic event.

Pentair Mansfield has not completed the review of the total population. The anticipated completion date is 15 June 2014.

- (v) The date on which the information of such defect or failure to comply was obtained.

20 August 2013

- (vi) In the case of a basic component which contains a defect or fails to comply, the number and location of these components in use at, supplied for, being supplied for, or may be supplied for, manufactured or being manufactured for one or more facilities or activities subject to the regulations in this Part.

To date Pentair has identified the following facilities potentially affected by this issue. Pentair is continuing the process of identifying the potential additional affected facilities.

Test Report	Assembly Number	Customer
5560	N900132	Korea Hydro Shin Kori
5517	N900008	Korea Hydro Shin Kori
5527	N900010	Korea Hydro Shin Wolsong
5414	N98432	Korea Electric Ulchin
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3718	N58737	Bechtel San Onofre Units 2 & 3
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5472	N99890	Korea Hydro Yonggwang Units 5 & 6
5487	N99965	Korea Hydro Kori Unit 1
5488	N99965	Korea Hydro Kori Unit 1
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5530	N900048	Korea Hydro Kori Units 3 & 4
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5570	N900091	State Nuclear Sanmen
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5572	N900091	State Nuclear Sanmen
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3807	N59180	Under Review
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5030	N82749	Korea Electric Ulchin Units 3 & 4
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3899	N59283	Taiwan Power Kyosheng Plant Units 1 & 2
4051	N59283	Taiwan Power Kyosheng Plant Units 1 & 2
5244	Under Review	Under Review
5400	Under Review	Under Review
5497	N99751	Korea Hydro Shin Kori Units 1 & 2
5515	N99798	Korea Hydro Shin Wolsong Units 1 & 2
4506	N73760	PWRPP
4506	N73762	PWRPP
4508	N73763	PWRPP
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3841	N61843	Carolina Power and Light, Shearon Harris Station
3860	N44417	Under Review
4048	N61190	Bechtel Public Service Hope Creek Units 1 & 2
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4201	N66295	Bechtel Korea Electric Korea Nuclear Units 7 & 8
4271	N65602	Peerless, Washington Public Power, Unit 1

(vii) The corrective action which has been, is being, or will be taken; the name of the individual or organization responsible for the action and the length of time that has been or will be taken to complete the action.



Pentair Mansfield is conducting the investigation into the possible deficiencies. Pentair Mansfield has not completed the review of the total population. The completion date is 15 June 2014. The timeframe is dictated by the total number of the population being investigated. If any of the population is discovered to have a deficiency, Pentair will conduct a separate 10 CFR 21 evaluation.

- (viii) Any advice related to the defect or failure to comply about the facility, activity, or basic component that has been, is being, or will be given to purchasers or licensees.

None at this time. As Pentair Mansfield determines any deficiencies, all affected licensees will be notified of any corrective actions.

- (ix) In the case of an early site permit, the entities to whom an early site permit was transferred.

Not applicable.

If you have any questions or wish to discuss this matter or this report, please feel free to contact me.

Sincerely,

A handwritten signature in cursive script that reads "Brian L. Martin".

Brian L. Martin  
Quality Assurance Manager