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SUBJECT: Forwards response to GL 95-07, "Pressure Locking & Thermal Binding of Safety-Related Power-Operated Gate Valves."

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INDIANA MICHIGAN POWER

February 16, 1996

AEP:NRC:0966Z

Docket Nos.: 50-315
50-316

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

Gentlemen:

Donald C. Cook Nuclear Plant Units 1 and 2
GL 95-07, PRESSURE LOCKING AND THERMAL BINDING
180 DAY RESPONSE

Generic Letter 95-07, "Pressure Locking and Thermal Binding of Safety-Related, Power-Operated Gate Valves," dated August 17, 1995, requests that certain actions be taken by utilities regarding the susceptibility and evaluation of power-operated gate valves to these phenomena.

Our 180-day response is contained in the attachment to this letter.

Sincerely,

E. E. Fitzpatrick
Vice President

SWORN TO AND SUBSCRIBED BEFORE ME

THIS 16th DAY OF FEBRUARY 1996

Notary Public

My Commission Expires: 3-9-96

plc

Attachment

cc: A. A. Blind
G. Charnoff
H. J. Miller
NFEM Section Chief
NRC Resident Inspector - Bridgman
J. R. Padgett

A056

ATTACHMENT TO AEP:NRC:0966Z

180-DAY RESPONSE TO GENERIC LETTER 95-07

Generic Letter 95-07 requires that within 180 days licensees complete and provide a summary description of the following items for valves which are potentially susceptible to either pressure locking or thermal binding:

- o Description of evaluations
- o Screening criteria
- o Susceptible evaluation results
- o List of susceptible valves
- o Corrective actions taken or scheduled
- o Justification for continued acceptability, as needed

Susceptibility Evaluations

A list of potentially susceptible valves was generated by identifying all safety related power operated gate valves, and any non-safety related power operated gate valves with licensing commitments. The resulting list, consisting of 126 valves at Cook Nuclear Plant Units 1 & 2, is given in Table 1.

A methodology for screening the valves potentially susceptible to pressure locking or thermal binding was developed using in-house criteria based on several previous investigations of the subject as well as criteria developed by Westinghouse for the Westinghouse Owners Group and by Vectra for their clients. The screening criteria consider component function and design, system design and system and ambient conditions.

Screening was accomplished using a two step process. The "group 1" screening, steps 1 thru 5, consists of criteria based on component (valve) design and required safety function. A valve which successfully met the screening criteria was deemed not susceptible, and no further evaluation was required. The "group 1" screening results are provided in Table 1.

If a valve was not excluded by the "Group 1" criteria, a second set of criteria, consisting of screening steps 6 thru 15 ("group 2") was applied. These criteria consist of questions based on system operating parameters and ambient conditions. To successfully pass this screening, all questions must be answered "NO" or "NA". The "group 2" results are provided in Table 2.

Evaluation of Results

Applying "group 1" screening steps to the 126 valves which were identified as potentially susceptible to pressure locking or thermal binding resulted in a total of 82 valves being identified as not susceptible. The "group 2" screening steps were then applied against the remaining 44 valves and all but four met the screening requirements. The disposition of these valves is noted in Table 2 by footnote a.

The four valves (Containment Sump Recirculation Valves 1-ICM-305, -306, 2-ICM-305, -306) were addressed per NRC Inspection Manual Temporary Instruction 2515/129. A heat transfer calculation was performed, the pressure rise in the bonnets calculated, and the total disk drag determined. On the basis of these calculations, it was concluded that the motor actuators have sufficient capability to overcome the increased load and the valves are operable.

Corrective Actions Taken

No specific corrective actions have been taken in response to Generic Letter 95-07, however, bonnet pressure equalizing lines were installed on 32 valves in Cook Nuclear Plant Units 1 and 2 prior to issuance of the Generic Letter 95-07.

Corrective Actions Scheduled

To provide an additional level of assurance that the four Containment Sump Recirculation valves are not susceptible to pressure locking, we will initiate a design change to install bonnet pressure equalizing lines. The work will be scheduled in accordance with our standard design change process to support the installation of equalizing lines during refueling outages for Unit 1 in 1998 and for Unit 2 in 1999.

GROUP 1 SCREENING

Group 1 Screening Criteria-- Component Level

1. Is the valve required to open to perform its safety function? If "NO", pressure locking and thermal binding are not a concern.

2. Is the valve a solid wedge gate valve? If "YES" the valve is not considered to be susceptible to pressure locking.

3. Is the valve a double disc gate valve? If "YES" the valve is not considered to be susceptible to thermal binding.

4. Is the valve a parallel slide gate valve? If "YES" the valve is not considered to be susceptible to thermal binding.

5. Does the valve, as installed, have a design feature; viz., a bonnet pressure equalizing line, which prevents pressure locking? If "YES" the valve is not considered to be susceptible to pressure locking.

VALVE NOMENCLATURE FOR TABLE 1

FW--Flexible Wedge

PS--Parallel Slide

DD--Dual Disk

BS--Ball and Socket

SW--Solid Wedge

TABLE 1 - GL 95-07 SCREENING STEPS 1 THRU 5

FULLTAG	VLVTYPE	MFGR	1	2	3	4	5	COMMENTS
1-FMO-201	GATE - FW	LUNKENHEIMER	N	N	N	N	N	Not applicable - not req.d to open
1-FMO-202	GATE - FW	LUNKENHEIMER	N	N	N	N	N	Not applicable - not req.d to open
1-FMO-203	GATE - FW	LUNKENHEIMER	N	N	N	N	N	Not applicable - not req.d to open
1-FMO-204	GATE - FW	LUNKENHEIMER	N	N	N	N	N	Not applicable - not req.d to open
1-ICM-111	GATE - FW	VELAN	N	N	N	N	N	Not applicable - not req.d to open
1-ICM-129	GATE - PS	COPES-VULCAN	N	N	N	Y	Y	Not susceptible to TB by design; PL by equalizing line
1-ICM-250	GATE - DD	ANCHOR-DARLING	Y	N	Y	N	Y	Not susceptible to TB by design; PL by equalizing line
1-ICM-251	GATE - DD	ANCHOR-DARLING	Y	N	Y	N	Y	Not susceptible to TB by design; PL by equalizing line
1-ICM-260	GATE - DD	ANCHOR-DARLING	Y	N	Y	N	Y	Not susceptible to TB by design; PL by equalizing line
1-ICM-265	GATE - DD	ANCHOR-DARLING	Y	N	Y	N	Y	Not susceptible to TB by design; PL by equalizing line
1-ICM-305	GATE - DD	ANCHOR-DARLING	Y	N	Y	N	N	Not susceptible to TB by design
1-ICM-306	GATE - DD	ANCHOR-DARLING	Y	N	Y	N	N	Not susceptible to TB by design
1-ICM-311	GATE - FW	VELAN	N	N	N	N	N	Not applicable - not req.d to open
1-ICM-321	GATE - FW	VELAN	N	N	N	N	N	Not applicable - not req.d to open
1-IMO-110	GATE - FW	VELAN	N	N	N	N	N	Not applicable - not req.d to open
1-IMO-120	GATE - FW	VELAN	N	N	N	N	N	Not applicable - not req.d to open
1-IMO-128	GATE - PS	COPES-VULCAN	N	N	N	Y	Y	Not susceptible to TB by design; PL by equalizing line
1-IMO-130	GATE - FW	VELAN	N	N	N	N	N	Not applicable - not req.d to open
1-IMO-140	GATE - FW	VELAN	N	N	N	N	N	Not applicable - not req.d to open
1-IMO-202	GATE - BS	CRANE-ALOYCO	Y	N	bs	N	N	See note b
1-IMO-204	GATE - BS	CRANE-ALOYCO	Y	N	bs	N	N	See note b
1-IMO-210	GATE - SW	CRANE-ALOYCO	Y	Y	N	N	N	Not susceptible to PL by design
1-IMO-211	GATE - SW	CRANE-ALOYCO	Y	Y	N	N	N	Not susceptible to PL by design
1-IMO-212	GATE - BS	CRANE-ALOYCO	N	N	bs	N	N	Not applicable-Not required to open, see note b
1-IMO-215	GATE - SW	CRANE-ALOYCO	Y	Y	N	N	N	Not susceptible to PL by design
1-IMO-220	GATE - SW	CRANE-ALOYCO	Y	Y	N	N	N	Not susceptible to PL by design
1-IMO-221	GATE - SW	CRANE-ALOYCO	Y	Y	N	N	N	Not susceptible to PL by design
1-IMO-222	GATE - BS	CRANE-ALOYCO	N	N	bs	N	N	Not applicable-not required to open, see note b
1-IMO-225	GATE - SW	CRANE-ALOYCO	Y	Y	N	N	N	Not susceptible to PL by design
1-IMO-255	GATE - DD	ANCHOR-DARLING	Y	N	Y	N	Y	Not susceptible to TB by design; PL by equalizing line
1-IMO-256	GATE - DD	ANCHOR-DARLING	Y	N	Y	N	Y	Not susceptible to TB by design; PL by equalizing line
1-IMO-261	GATE - FW	ANCHOR-DARLING	Y	N	N	N	N	See group 2 screening for PL/TB
1-IMO-270	GATE - FW	WALWORTH	Y	N	N	N	N	Not applicable - see note c
1-IMO-275	GATE - FW	WALWORTH	Y	N	N	N	N	Not applicable - see note c
1-IMO-310	GATE - DD	ANCHOR-DARLING	N	N	Y	N	Y	Not susceptible to TB by design; PL by equalizing line
1-IMO-314	GATE - DD	ANCHOR-DARLING	N	N	Y	N	Y	Not susceptible to TB by design; PL by equalizing line
1-IMO-315	GATE - FW	LUNKENHEIMER	Y	N	N	N	Y	Not susceptible to PL by equalizing line
1-IMO-316	GATE - FW	LUNKENHEIMER	Y	N	N	N	N	See group 2 screening for PL/TB
1-IMO-320	GATE - DD	ANCHOR-DARLING	N	N	Y	N	Y	Not susceptible to TB by design; PL by equalizing line
1-IMO-324	GATE - DD	ANCHOR-DARLING	N	N	Y	N	Y	Not susceptible to TB by design; PL by equalizing line
1-IMO-325	GATE - FW	LUNKENHEIMER	Y	N	N	N	Y	Not susceptible to PL by equalizing line
1-IMO-326	GATE - FW	LUNKENHEIMER	Y	N	N	N	N	See group 2 screening for PL/TB
1-IMO-330	GATE - BS	ALOYCO	Y	N	bs	N	N	See note b
1-IMO-331	GATE - BS	ALOYCO	Y	N	bs	N	N	See note b
1-IMO-340	GATE - DD	ANCHOR-DARLING	Y	N	Y	N	Y	Not susceptible to TB by design; PL by equalizing line
1-IMO-350	GATE - DD	ANCHOR-DARLING	Y	N	Y	N	Y	Not susceptible to TB by design; PL by equalizing line
1-IMO-360	GATE - FW	ANCHOR-DARLING	Y	N	N	N	N	See group 2 screening for PL/TB
1-IMO-361	GATE - FW	ANCHOR-DARLING	Y	N	N	N	N	See group 2 screening for TL/PB
1-IMO-362	GATE - FW	ANCHOR-DARLING	Y	N	N	N	N	See group 2 screening for PL/TB
1-IMO-390	GATE - DD	ANCHOR-DARLING	N	N	Y	N	Y	Not susceptible to TB by design; PL by equalizing line
1-IMO-910	GATE - FW	ANCHOR-DARLING	Y	N	N	N	N	See group 2 screening for PL/TB
1-IMO-911	GATE - FW	ANCHOR-DARLING	Y	N	N	N	N	See group 2 screening for PL/TB
1-MRV-210	GATE - PS	HOPKINSON	N	N	N	Y	Y	Not susceptible to TB by design; PL by auto dump va's
1-MRV-220	GATE - PS	HOPKINSON	N	N	N	Y	Y	Not susceptible to TB by design; PL by auto dump va's
1-MRV-230	GATE - PS	HOPKINSON	N	N	N	Y	Y	Not susceptible to TB by design; PL by auto dump va's
1-MRV-240	GATE - PS	HOPKINSON	N	N	N	Y	Y	Not susceptible to TB by design; PL by auto dump va's
1-NMO-151	GATE - FW	VELAN	N	N	N	N	N	Not applicable - not req.d to open
1-NMO-152	GATE - FW	VELAN	N	N	N	N	N	Not applicable - not req.d to open
1-NMO-153	GATE - FW	VELAN	N	N	N	N	N	Not applicable - not req.d to open
1-QCM-250	GATE - FW	ANCHOR-DARLING	N	N	N	N	N	Not applicable - not req.d to open
1-QCM-350	GATE - FW	ANCHOR-DARLING	N	N	N	N	N	Not applicable - not req.d to open
1-QMO-451	GATE - FW	ANCHOR-DARLING	N	N	N	N	N	Not applicable - not req.d to open
1-QMO-452	GATE - FW	ANCHOR-DARLING	N	N	N	N	N	Not applicable - not req.d to open
2-FMO-201	GATE - FW	LUNKENHEIMER	N	N	N	N	N	Not applicable - not req.d to open
2-FMO-202	GATE - FW	LUNKENHEIMER	N	N	N	N	N	Not applicable - not req.d to open
2-FMO-203	GATE - FW	LUNKENHEIMER	N	N	N	N	N	Not applicable - not req.d to open
2-FMO-204	GATE - FW	LUNKENHEIMER	N	N	N	N	N	Not applicable - not req.d to open
2-ICM-111	GATE - FW	VELAN	N	N	N	N	N	Not applicable - not req.d to open
2-ICM-129	GATE - PS	COPES-VULCAN	N	N	N	Y	Y	Not susceptible to TB by design; PL by equalizing line
2-ICM-250	GATE - DD	ANCHOR-DARLING	Y	N	Y	N	Y	Not susceptible to TB by design; PL by equalizing line
2-ICM-251	GATE - DD	ANCHOR-DARLING	Y	N	Y	N	Y	Not susceptible to TB by design; PL by equalizing line
2-ICM-260	GATE - FW	WALWORTH	Y	N	N	N	N	Not applicable - see note c
2-ICM-265	GATE - FW	WALWORTH	Y	N	N	N	N	Not applicable - see note c
2-ICM-305	GATE - DD	ANCHOR-DARLING	Y	N	Y	N	N	Not susceptible to TB by design
2-ICM-306	GATE - DD	ANCHOR-DARLING	Y	N	Y	N	N	Not susceptible to TB by design
2-ICM-311	GATE - FW	VELAN	N	N	N	N	N	Not applicable - not req.d to open
2-ICM-321	GATE - FW	VELAN	N	N	N	N	N	Not applicable - not req.d to open
2-IMO-110	GATE - FW	VELAN	N	N	N	N	N	Not applicable - not req.d to open
2-IMO-120	GATE - FW	VELAN	N	N	N	N	N	Not applicable - not req.d to open
2-IMO-128	GATE - PS	COPES-VULCAN	N	N	N	Y	Y	Not susceptible to TB by design; PL by equalizing line

TABLE 1-GL 95-07 SCREENING STEPS 1 THRU 5

FULLTAG	VLVTYPE	MFGR	1	2	3	4	5	COMMENTS
2-IMO-130	GATE - FW	VELAN	N	N	N	N	N	Not applicable - not req.d to open
2-IMO-140	GATE - FW	VELAN	N	N	N	N	N	Not applicable - not req.d to open
2-IMO-202	GATE - BS	CRANE-ALOYCO	Y	N	bs	N	N	See note b
2-IMO-204	GATE - BS	CRANE-ALOYCO	Y	N	bs	N	N	See note b
2-IMO-210	GATE - SW	CRANE-ALOYCO	Y	Y	N	N	N	Not susceptible to PL by design
2-IMO-211	GATE - SW	CRANE-ALOYCO	Y	Y	N	N	N	Not susceptible to PL by design
2-IMO-212	GATE - BS	CRANE-ALOYCO	N	N	bs	N	N	Not applicable-not required to open, see note b
2-IMO-215	GATE - SW	CRANE-ALOYCO	Y	Y	N	N	N	Not susceptible to PL by design
2-IMO-220	GATE - SW	CRANE-ALOYCO	Y	Y	N	N	N	Not susceptible to PL by design
2-IMO-221	GATE - SW	CRANE-ALOYCO	Y	Y	N	N	N	Not susceptible to PL by design
2-IMO-222	GATE - BS	CRANE-ALOYCO	N	N	bs	N	N	Not applicable-not required to open, see note b
2-IMO-225	GATE - SW	CRANE-ALOYCO	Y	Y	N	N	N	Not susceptible to PL by design
2-IMO-255	GATE - DD	ANCHOR-DARLING	Y	N	Y	N	Y	Not susceptible to TB by design; PL by equalizing line
2-IMO-256	GATE - DD	ANCHOR-DARLING	Y	N	Y	N	Y	Not susceptible to TB by design; PL by equalizing line
2-IMO-261	GATE - FW	ANCHOR-DARLING	Y	N	N	N	N	See group 2 screening for PL/TB
2-IMO-270	GATE - FW	WALWORTH	Y	N	N	N	N	Not applicable - see note c
2-IMO-275	GATE - FW	WALWORTH	Y	N	N	N	N	Not applicable - see note c
2-IMO-310	GATE - DD	ANCHOR-DARLING	N	N	Y	N	Y	Not susceptible to TB by design; PL by equalizing line
2-IMO-314	GATE - DD	ANCHOR-DARLING	N	N	Y	N	Y	Not susceptible to TB by design; PL by equalizing line
2-IMO-315	GATE - FW	WALWORTH	Y	N	N	N	Y	Not susceptible to PL by equalizing line
2-IMO-316	GATE - FW	WALWORTH	Y	N	N	N	N	See group 2 screening for PL/TB
2-IMO-320	GATE - DD	ANCHOR-DARLING	N	N	Y	N	Y	Not susceptible to TB by design; PL by equalizing line
2-IMO-324	GATE - DD	ANCHOR-DARLING	N	N	Y	N	Y	Not susceptible to TB by design; PL by equalizing line
2-IMO-325	GATE - FW	WALWORTH	Y	N	N	N	Y	Not susceptible to PL by equalizing line
2-IMO-326	GATE - FW	WALWORTH	Y	N	N	N	N	See group 2 screening for PL/TB
2-IMO-330	GATE - BS	ALOYCO	Y	N	bs	N	N	See note b
2-IMO-331	GATE - BS	ALOYCO	Y	N	bs	N	N	See note b
2-IMO-340	GATE - DD	ANCHOR-DARLING	Y	N	Y	N	Y	Not susceptible to TB by design; PL by equalizing line
2-IMO-350	GATE - DD	ANCHOR-DARLING	Y	N	Y	N	Y	Not susceptible to TB by design; PL by equalizing line
2-IMO-360	GATE - FW	ANCHOR-DARLING	Y	N	N	N	N	See group 2 screening for PL/TB
2-IMO-361	GATE - FW	ANCHOR-DARLING	Y	N	N	N	N	See group 2 screening for PL/TB
2-IMO-362	GATE - FW	ANCHOR-DARLING	Y	N	N	N	N	See group 2 screening for PL/TB
2-IMO-390	GATE - DD	ANCHOR-DARLING	N	N	Y	N	Y	Not susceptible to TB by design; PL by equalizing line
2-IMO-910	GATE - FW	ANCHOR-DARLING	Y	N	N	N	N	See group 2 screening for PL/TB
2-IMO-911	GATE - FW	ANCHOR-DARLING	Y	N	N	N	N	See group 2 screening for PL/TB
2-MRV-210	GATE - PS	HOPKINSON	N	N	N	Y	Y	Not susceptible to TB by design; PL by auto dump va's
2-MRV-220	GATE - PS	HOPKINSON	N	N	N	Y	Y	Not susceptible to TB by design; PL by auto dump va's
2-MRV-230	GATE - PS	HOPKINSON	N	N	N	Y	Y	Not susceptible to TB by design; PL by auto dump va's
2-MRV-240	GATE - PS	HOPKINSON	N	N	N	Y	Y	Not susceptible to TB by design; PL by auto dump va's
2-NMO-151	GATE - FW	VELAN	N	N	N	N	N	Not applicable - not req.d to open
2-NMO-152	GATE - FW	VELAN	N	N	N	N	N	Not applicable - not req.d to open
2-NMO-153	GATE - FW	VELAN	N	N	N	N	N	Not applicable - not req.d to open
2-QCM-250	GATE - FW	ANCHOR-DARLING	N	N	N	N	N	Not applicable - not req.d to open
2-QCM-350	GATE - FW	ANCHOR-DARLING	N	N	N	N	N	Not applicable - not req.d to open
2-QMO-451	GATE - FW	ANCHOR-DARLING	N	N	N	N	N	Not applicable - not req.d to open
2-QMO-452	GATE - FW	ANCHOR-DARLING	N	N	N	N	N	Not applicable - not req.d to open

NOTES: a. (General) All safety related power operated gate valves are listed. Non-safety related valves with licensing commitments; viz., FMO-201/202/203/204 are also listed.

b. Valves designated "bs" in step 3 are double disc, ball and socket type valves which are subject to both pressure locking and thermal binding.

c. Valves are open during normal and safety related operation; not required to change position.

GROUP 2 SCREENING

Group 2 Screening Criteria--System Level

6. Is the valve, as a matter of course, exposed to high pressure fluid and the attached piping depressurized prior to valve opening?

7. Is the valve and attached piping subject to pressurization as a result of leakage from a high pressure source and is the attached piping subsequently depressurized prior to valve opening?

8. Is the valve stem oriented in a horizontal or below horizontal configuration so as to trap steam/condensate in the bonnet when closed?

9. Does the valve potentially experience body temperature changes due to fluid temperature conditions in the attached piping prior to opening?

10. Can the valve potentially experience hot ambient temperature conditions; i.e., high energy line break?

11. Can the valve see temperature increases greater than normal ambient swings?

12. Is the valve closed hot followed by a significant cooldown and then required to reopen?

13 Is the valve required to close during system cooldown (valve closure terminates cooling) and required to reopen after the valve has cooled down?

14. Can a significant temperature gradient develop across the valve after it is closed and is it then required to reopen?

15. Is the hot valve required to close while the system is in cooldown and signalled to reopen while the valve is partially cooled?

If the answers to questions 6 thru 11 are "NO", the valve is not susceptible to pressure locking.

If the answer to questions 12 thru 15 are "NO", the valve is not susceptible to thermal binding.

TABLE 2--GL 95-07 SCREENING STEPS 6 THRU 15

FULLTAG	6	7	8	9	10	11	12	13	14	15	COMMMENTS
Pressure Locking (only)											
1-ICM-305	N	N	N	Y	N	N	NA	NA	NA	NA	resolved by analysis, see note a
1-ICM-306	N	N	N	Y	N	N	NA	NA	NA	NA	resolved by analysis, see note a
2-ICM-305	N	N	N	Y	N	N	NA	NA	NA	NA	resolved by analysis, see note a
2-ICM-306	N	N	N	Y	N	N	NA	NA	NA	NA	resolved by analysis, see note a
Thermal Binding (only)											
1-IMO-210	NA	NA	NA	NA	NA	NA	N	N	N	N	meets screening criteria
1-IMO-211	NA	NA	NA	NA	NA	NA	N	N	N	N	meets screening criteria
1-IMO-215.	NA	NA	NA	NA	NA	NA	N	N	N	N	meets screening criteria
1-IMO-220	NA	NA	NA	NA	NA	NA	N	N	N	N	meets screening criteria
1-IMO-221	NA	NA	NA	NA	NA	NA	N	N	N	N	meets screening criteria
1-IMO-225	NA	NA	NA	NA	NA	NA	N	N	N	N	meets screening criteria
1-IMO-315	NA	NA	NA	NA	NA	NA	N	N	N	N	meets screening criteria
1-IMO-325	NA	NA	NA	NA	NA	NA	N	N	N	N	meets screening criteria
2-IMO-210	NA	NA	NA	NA	NA	NA	N	N	N	N	meets screening criteria
2-IMO-211	NA	NA	NA	NA	NA	NA	N	N	N	N	meets screening criteria
2-IMO-215	NA	NA	NA	NA	NA	NA	N	N	N	N	meets screening criteria
2-IMO-220	NA	NA	NA	NA	NA	NA	N	N	N	N	meets screening criteria
2-IMO-221	NA	NA	NA	NA	NA	NA	N	N	N	N	meets screening criteria
2-IMO-225	NA	NA	NA	NA	NA	NA	N	N	N	N	meets screening criteria
2-IMO-315	NA	NA	NA	NA	NA	NA	N	N	N	N	meets screening criteria
2-IMO-325	NA	NA	NA	NA	NA	NA	N	N	N	N	meets screening criteria
Pressure Locking & Thermal Binding											
1-IMO-202	N	N	N	N	N	N	N	N	N	N	meets screening criteria
1-IMO-204	N	N	N	N	N	N	N	N	N	N	meets screening criteria
1-IMO-261	N	N	N	N	N	N	N	N	N	N	meets screening criteria
1-IMO-316	N	N	N	N	N	N	N	N	N	N	meets screening criteria
1-IMO-326	N	N	N	N	N	N	N	N	N	N	meets screening criteria
1-IMO-330	N	N	N	N	N	N	N	N	N	N	meets screening criteria
1-IMO-331	N	N	N	N	N	N	N	N	N	N	meets screening criteria
1-IMO-360	N	N	N	N	N	N	N	N	N	N	meets screening criteria
1-IMO-361	N	N	N	N	N	N	N	N	N	N	meets screening criteria
1-IMO-362	N	N	N	N	N	N	N	N	N	N	meets screening criteria
1-IMO-910	N	N	N	N	N	N	N	N	N	N	meets screening criteria
1-IMO-911	N	N	N	N	N	N	N	N	N	N	meets screening criteria
2-IMO-202	N	N	N	N	N	N	N	N	N	N	meets screening criteria
2-IMO-204	N	N	N	N	N	N	N	N	N	N	meets screening criteria
2-IMO-261	N	N	N	N	N	N	N	N	N	N	meets screening criteria
2-IMO-316	N	N	N	N	N	N	N	N	N	N	meets screening criteria
2-IMO-326	N	N	N	N	N	N	N	N	N	N	meets screening criteria
2-IMO-330	N	N	N	N	N	N	N	N	N	N	meets screening criteria
2-IMO-331	N	N	N	N	N	N	N	N	N	N	meets screening criteria
2-IMO-360	N	N	N	N	N	N	N	N	N	N	meets screening criteria
2-IMO-361	N	N	N	N	N	N	N	N	N	N	meets screening criteria
2-IMO-362	N	N	N	N	N	N	N	N	N	N	meets screening criteria
2-IMO-910	N	N	N	N	N	N	N	N	N	N	meets screening criteria
2-IMO-911	N	N	N	N	N	N	N	N	N	N	meets screening criteria

NOTE: a. Resolved by analysis in response to NRC TI 2515/129.