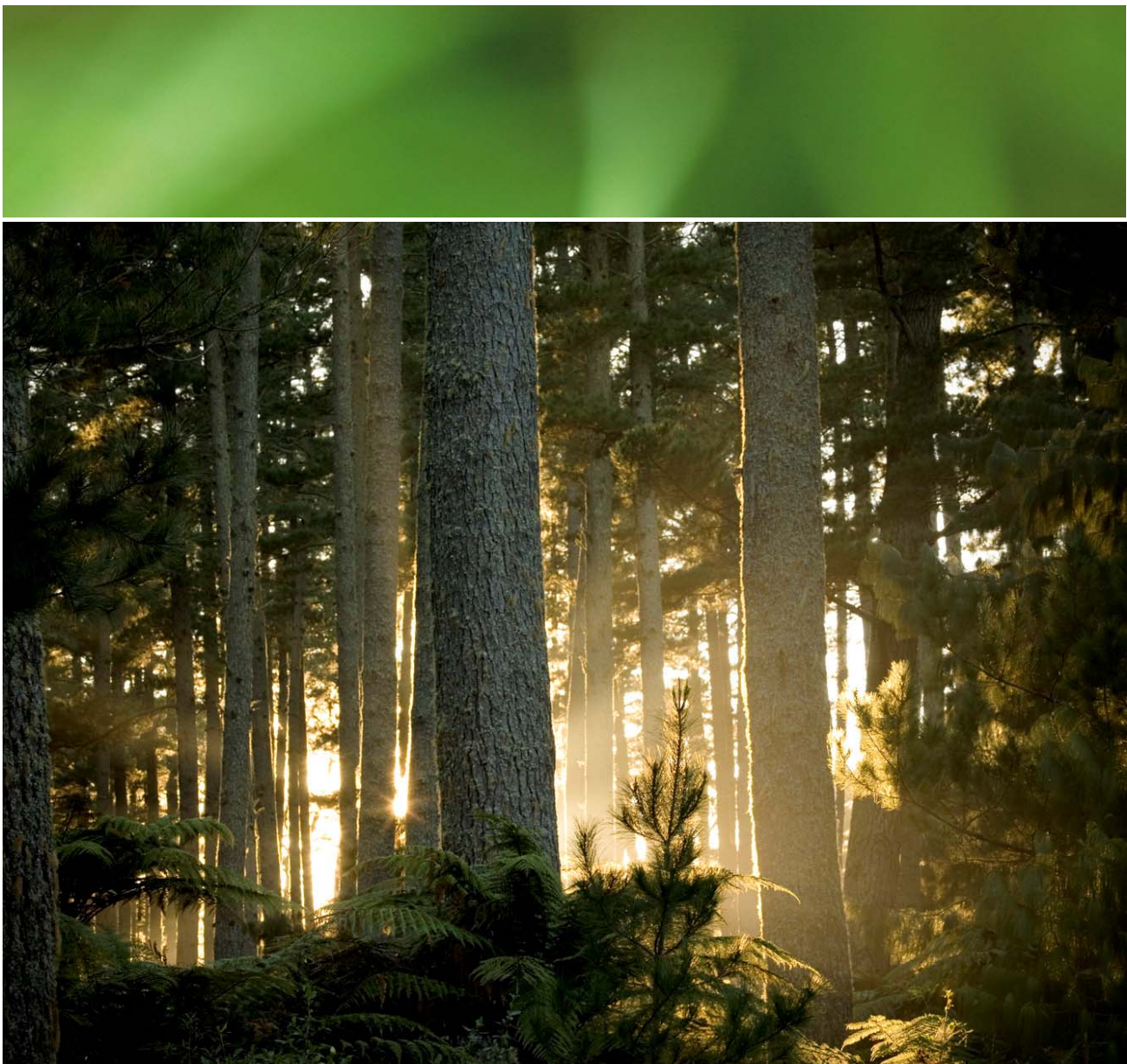


**THE EFFICACY OF BRUSH-ON REMEDIAL  
TREATMENTS ON RADIATA PINE FRAMING**

**FULL YEAR PROGRESS REPORT – MAY 2010**

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# THE EFFICACY OF BRUSH-ON REMEDIAL TREATMENTS ON RADIATA PINE FRAMING

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### SUMMARY

Untreated radiata pine framing timber was exposed to brown rot decay fungi and then treated with brush-on remedial preservatives. Over the 32-weeks of subsequent exposure patches of decay mycelium had developed on untreated surfaces of samples held in high moisture content (>30%) conditions. There very little mycelium development on samples held in low moisture content conditions (<30%) but decay had become established on a few damper samples. There were very few changes in deflection measurements except for one or two samples in the untreated control groups and the groups treated on the edges only, where decay had obviously become well established.

### INTRODUCTION

Radiata pine, 90 mm x 45 mm, planer gauged, kiln dried, clears grade, radiata pine sapwood samples were wet and exposed to brown rot decay fungi for several weeks. There were two main exposure sets. One, pre-infected with *Oligoporus placenta* was later exposed to wet conditions where the moisture content would remain greater than 30% (HMC samples). The second set was pre-infected with *Gloeophyllum sepiarium* and later exposed to conditions where the moisture content would stay below 30% moisture content (LMC samples). Treatment groups are summarised in Table 1. Initial sample details and measurements are in Appendix I.

Samples were then re-dried and brush-on remedial treatment products were applied either 50/50 copper naphthenate (Metalex green) and kerosene or a boric acid/borax mixture in monoethylene glycol (20% BAE). The samples were then rewet and exposed in humid controlled conditions. Full details of sample treatment and exposure positions are in Appendix II.

Framing samples treated with boron to the H1.2 specification and untreated control samples were included for comparative purposes. The boron treated samples and one set of the untreated samples were exposed to the relevant decay fungi during the initial decay period. A second series of untreated samples was not exposed to decay fungi.

The trial has been assessed for decay, mould and deflection at eight-week intervals since the start of the main exposure period in September 2009. These assessments are summarised in earlier reports. This report summarises the condition of the samples over the 16 - 32 week exposure period.

**TABLE 1  
TREATMENT GROUPS**

Group code	Number of Samples	Initial Decay period (wks)	Preservative	Edges/Faces Treated
<b>High Moisture Content Groups</b>				
<b>C61H</b>	20	8	Cu Naph.	1E
<b>C62H</b>	20	8	Cu Naph.	2E
<b>C63H</b>	20	8	Cu Naph.	2E, 1F
<b>C64H</b>	20	8	Cu Naph.	2E, 2F
<b>B61H</b>	20	8	Boron/Glycol	1E
<b>B62H</b>	20	8	Boron/Glycol	2E
<b>B63H</b>	20	8	Boron/Glycol	2E, 1F
<b>B64H</b>	20	8	Boron/Glycol	2E, 2F
<b>C31H</b>	20	4	Cu Naph.	1E
<b>C32H</b>	20	4	Cu Naph.	2E
<b>C33H</b>	20	4	Cu Naph.	2E, 1F
<b>C34H</b>	20	4	Cu Naph.	2E, 2F
<b>B31H</b>	20	4	Boron/Glycol	1E
<b>B32H</b>	20	4	Boron/Glycol	2E
<b>B33H</b>	20	4	Boron/Glycol	2E, 1F
<b>B34H</b>	20	4	Boron/Glycol	2E, 2F
<b>B3H<sup>2</sup></b>	20	4	Boron H1.2	na
<b>U3H</b>	20	4	none	
<b>UMH</b>	20	0	none	
<b>Low Moisture Content Groups</b>				
<b>C62L</b>	10	12	Cu Naph	2E
<b>C64L</b>	10	12	Cu Naph	2E, 2F
<b>B62L</b>	10	12	Boron/Glycol	2E
<b>B64L</b>	10	12	Boron/Glycol	2E, 2F
<b>C32L</b>	10	7	Cu Naph	2E
<b>C34L</b>	10	7	Cu Naph	2E, 2F
<b>B32L</b>	10	7	Boron/Glycol	2E
<b>B34L</b>	10	7	Boron/Glycol	2E, 2F
<b>B3L<sup>2</sup></b>	10	7	Boron H1.2	na
<b>U3L</b>	10	7	none	
<b>UML</b>	10	0	none	

## ASSESSMENT METHODS AND RESULTS

Eight-weekly assessments were completed in October/November 2009 (8-week), December 2009/January 2010 (16-week), February/March 2010 (24-week) and on the 12<sup>th</sup> and 26<sup>th</sup> April (32-weeks). The samples were removed from the tanks, weighed and measured. Visual assessments of decay mycelium development and mould infection were completed using the ratings systems shown in Appendix III. Moisture content calculations and mould ratings data are summarised in Table 2.

The surfaces of each sample were tested with a blunt probe to determine whether the decay fungi were damaging the framing and deflection as a plank under a constant load was measured. The decay rating system is in Appendix III. Decay ratings and deflection data are summarised in Table 3.

After assessment the samples were returned to their original position in the stacks and the HMC samples were lightly sprayed with water.

**TABLE 2**  
**MOISTURE CONTENT AND MOULD RATINGS OVER 32 WEEKS**

Treatment Group Code	Moisture content %				Mould Ratings			
	8 wks.	16 wks.	24 wks.	32 wks.	8 wks.	16 wks.	24 wks.	32 wks.
<b>HIGH MOISTURE CONTENT SAMPLES</b>								
<b>C61H</b>	37	37	37	37	3.7	4.1	4.3	4.4
<b>C62H</b>	36	37	37	37	3.7	4.1	4.3	4.5
<b>C63H</b>	38	39	40	40	2.6	2.9	3.2	3.7
<b>C64H</b>	36	37	38	39	2.3	2.4	2.7	2.9
<b>B61H</b>	32	33	33	33	3.2	4.6	4.6	4.9
<b>B62H</b>	35	37	37	37	3.3	4.5	4.8	4.6
<b>B63H</b>	37	40	42	42	2.3	3.5	3.8	4.1
<b>B64H</b>	39	44	48	51	1.8	2.4	2.6	2.9
<b>C31H</b>	36	38	38	39	3.3	3.7	3.9	4.2
<b>C32H</b>	36	37	37	37	2.8	3.1	3.4	3.7
<b>C33H</b>	33	37	36	36	2.6	2.9	3.2	3.5
<b>C34H</b>	36	36	37	37	2.1	2.3	2.5	2.7
<b>B31H</b>	33	34	34	34	2.9	4.0	4.2	4.7
<b>B32H</b>	36	36	36	35	2.8	4.0	4.2	4.6
<b>B33H</b>	35	38	40	40	2.0	2.7	3.2	3.7
<b>B34H</b>	36	41	44	46	1.7	2.3	2.6	2.8
<b>B3H</b>	37	41	44	46	2.1	2.4	2.4	2.4
<b>U3H</b>	33	33	33	33	2.9	3.5	3.8	4.3
<b>UMH</b>	34	35	34	35	3.0	3.8	4.0	4.2
<b>LOW MOISTURE CONTENT SAMPLES</b>								
<b>C62L</b>	27	27	26	24 <sup>1</sup>	4.0	4.4	4.6	4.3
<b>C64L</b>	27	27	27	27	3.0	3.4	3.6	3.4
<b>B62L</b>	28	28	27	26	3.1	3.8	4.3	4.3
<b>B64L</b>	31	32	31	29	1.9	2.2	2.4	2.6
<b>C32L</b>	27	28	27	26	3.2	4.0	4.5	4.2
<b>C34L</b>	27	28	26	27	2.7	3.1	3.3	3.7
<b>B32L</b>	28	28	28	27	2.5	3.6	4.0	4.1
<b>B34L</b>	30	30	30	29	1.7	2.1	2.1	2.3
<b>B3L</b>	30	30	30	28	1.8	2.0	2.2	2.4
<b>U3L</b>	27	27	26	24 <sup>1</sup>	3.8	4.1	4.4	4.4
<b>UML</b>	28	27	28	27	3.7	4.3	4.3	4.0

<sup>1</sup> Decay in samples from this group reduced the weight and calculated moisture content.

The average moisture content of a few HMC groups increased slightly over the exposure period. This was due to condensation dripping on to the upper layers in the tanks and on samples close to the sides of the tanks, increasing the moisture content of a few samples in each treatment group. Differences between treatment groups were associated with the position of samples in the tanks rather than preservative treatment.

**TABLE 3**  
**INDEX OF CONDITION AND DEFLECTION OVER 32 WEEKS**

Treatment Group Code	Index of Condition <sup>1</sup>				Deflection (mm)			
	8 wks.	16 wks.	24 wks.	32 wks.	8 wks.	16 wks.	24 wks.	32 wks.
<b>HIGH MOISTURE CONTENT SAMPLES</b>								
<b>C61H</b>	8.4	8.3	8.6	8.2	2.38	2.40	2.40	2.34
<b>C62H</b>	8.2	8.1	8.3	8.1	2.37	2.37	2.42	2.38
<b>C63H</b>	8.3	8.2	8.4	8.1	2.17	2.18	2.37	2.17
<b>C64H</b>	8.1	7.9	8.1	8.0	2.17	2.23	2.17	2.18
<b>B61H</b>	8.6	8.7	8.5	8.2	2.24	2.26	2.31	2.29
<b>B62H</b>	8.6	8.1	8.2	8.2	2.39	2.43	2.44	2.39
<b>B63H</b>	8.6	8.5	8.4	8.2	2.15	2.19	2.20	2.15
<b>B64H</b>	8.4	8.3	8.5	8.2	2.20	2.25	2.24	2.20
<b>C31H</b>	9.5	9.2	9.3	8.9	2.37	2.42	2.44	2.50
<b>C32H</b>	9.6	9.5	9.2	8.9	2.18	2.21	2.28	2.21
<b>C33H</b>	9.4	9.2	9.5	9.2	2.47	2.53	2.52	2.47
<b>C34H</b>	9.2	9.2	9.4	8.9	2.24	2.31	2.31	2.23
<b>B31H</b>	9.7	9.1	8.8	8.0	2.45	2.50	2.53	2.51
<b>B32H</b>	9.6	9.4	9.3	9.1	2.31	2.33	2.32	2.29
<b>B33H</b>	9.8	9.6	9.9	9.8	2.33	2.37	2.37	2.31
<b>B34H</b>	9.6	9.5	9.4	9.2	2.17	2.21	2.20	2.17
<b>B3H<sup>2</sup></b>	10.0	10.0	10.0	10.0	3.92	3.98	3.99	3.91
<b>U3H</b>	9.4	9.0	8.9	8.4	2.43	2.49	2.54	2.45
<b>UMH</b>	10.0	10.0	9.9	9.6	2.27	2.32	2.31	2.28
<b>LOW MOISTURE CONTENT SAMPLES</b>								
<b>C62L</b>	8.1	8.1	7.8	7.6	2.52	2.58	2.70	2.84
<b>C64L</b>	8.3	8.1	7.9	8.0	2.35	2.37	2.33	2.33
<b>B62L</b>	8.9	8.4	8.2	8.2	2.31	2.37	2.46	2.53
<b>B64L</b>	8.2	8.4	7.9	8.0	2.35	2.37	2.36	2.34
<b>C32L</b>	8.7	8.4	8.5	8.5	2.18	2.21	2.19	2.19
<b>C34L</b>	8.6	8.2	8.3	8.3	2.11	2.11	2.10	2.09
<b>B32L</b>	9.0	9.0	8.8	8.8	2.11	2.12	2.11	2.11
<b>B34L</b>	8.6	8.6	8.5	8.4	2.37	2.34	2.34	2.33
<b>B3L<sup>2</sup></b>	10.0	10.0	10.0	10.0	3.79	3.49	3.73	3.75
<b>U3L</b>	8.5	8.7	8.1	7.8	2.44	2.52	2.66	2.79
<b>UML</b>	10.0	10.0	10.0	10.0	2.27	2.28	2.26	2.27

<sup>1</sup> Index of Condition is the average decay rating for all of the samples in a group.

<sup>2</sup> This group was framing grade timber, all other groups were clears grade sapwood.

The moisture content of the LMC groups remained relatively constant, declining slightly over the 32 weeks. A plastic cover was placed over the stack initially to protect it from humidity sprays and condensation drips. Later plastic sheets were stretched over three sides to give further protection from spray drift and water splashes. However, samples in the bottom layer of the stack are only 70 mm from a constantly wet concrete floor and have become wetter as the trial progressed.

Moulds developed on most of the untreated surfaces particularly on samples close to the sides of the tanks or in the upper layers where the samples were wetter. Mould ratings generally increased as the trial progressed. There has been more mould development on the copper naphthenate treated samples than on the boron treated samples and more on the HMC samples than the LMC samples. At this stage moulds appear to have had little effect on decay development.

On all of the samples the position of the original decay feeder blocks and the decay that developed during the initial decay exposure period was marked by darkening of the wood and associated dark mould. Over the 32-week exposure period occasional patches of mycelium developed on the untreated surfaces of a few treated samples and on untreated samples in wetter positions in the tanks. Initially this mycelium was immediately adjacent to the original decay patches but, as the trial progressed, light, lace-like traces of mycelium developed away from the original decay on wetter untreated sections of some samples. Pale patches of discolouration also developed under the mycelium, indicating incipient decay. Initially the wood in these areas was relatively intact but occasional softer pockets of decay had developed in the discoloured areas by the 32-week assessment.

There has been no deterioration in the samples treated with boron to the H1.2 specification and very little deterioration of untreated samples that were not exposed to decay fungi in the initial pre-treatment period.

At this stage obvious deflection increases are restricted to one or two samples in groups treated on one and two edges or untreated samples in the groups that had been infected with decay fungi in the initial decay exposure phase. This has resulted in largely unchanged deflection measurement averages throughout the exposure period.

While few obvious trends have emerged at this stage mycelium and incipient decay development on samples in the HMC untreated, or one and two edge treated groups, indicates that this will change at the next few assessments. Even so, development of decay has for the most part been relatively slow and inconsistent within treatment groups. In the LMC groups changes are more likely to be limited to those few samples that are exposed to damper conditions.



**Figure 1** – Copper naphthenate treated HMC samples in tank 4, layer 2 (2<sup>nd</sup> from bottom), after 16 weeks exposure. The colour of the preservative had faded slightly and initial decay areas were still visible.



**Figure 2** – Copper naphthenate treated HMC samples in tank 2, layer 1 (5<sup>th</sup> from top), after 32 weeks exposure. Very little obvious difference since the 16-week assessment.





**Figure 3** – HMC boron treated samples in tank 6, layer 4 (3<sup>rd</sup> from top), after 16 weeks exposure. There few obvious changes in the samples and areas of decay from the original feeder blocks were still visible.



**Figure 4** – HMC boron treated samples in tank 6, layer 5 (2<sup>nd</sup> from top), after 32 weeks exposure. There was more mould and a patch of decay mycelium on the samples treated on one edge in the centre of the tank but few other obvious changes since the 16 week assessment.



**Figure 5** – HMC sample C31H/11, copper naphthenate treated on the lower edge, after 16 weeks exposure. Decay mycelium spreading from the original infected area but there was no obvious softening of the wood underneath.



**Figure 6** – Untreated sample (not pre-decayed) UMH/15, after 16 weeks exposure. Fine mycelium and pale discoloration developing at one end.



**Figure 7** – HMC sample B51H/5, treated with boron on the lower edge, after 10 weeks exposure. Mycelium, decay patches and extensive moulds developing on untreated surfaces around the area of the original infection.



**Figure 8** – Untreated sample U3H/10, after 16 weeks exposure. Decay mycelium was developing over an extensive area around the original infection.



**Figure 9** – Untreated sample (not pre-decayed) UMH/8, after 16 weeks exposure. Decay mycelium and pale discolouration at one end appeared to have come from outside contamination.



**Figure 10** – Untreated sample U3H/10, after 32 weeks exposure. Decay mycelium had spread over most of the surface but the wood was still relatively sound and deflection had only increased by 16%.



**Figure 11** – HMC sample B32H/13, treated on two edges, after 32 weeks exposure. Decay mycelium spreading on the faces between the treated edges. Light – moderate decay was present but deflection had increased by only 5%.



**Figure 12** – HMC sample C64H/1, after 32 weeks exposure. Decay was well established on both edges before treatment but has not increased since the sample was treated on all four sides.



**Figure 13** – Untreated sample (not pre-decayed) UMH/8, after 32 weeks exposure. Decay now lightly established at one end but deflection largely unchanged.



**Figure 14** – LMC sample C62L/6, after 52 weeks exposure. Decay fruiting bodies and moderate decay between the treated edges. This sample was in the bottom layer of the LMC stack and deflection had increased by 30%.



**Figure 15** – LMC sample B64L/5, after 52 weeks exposure. Decay was well established on the upper edge before treatment but had not increased since.



**Figure 16** – LMC sample C62L/7, after 52 weeks exposure. Well established decay between the treated edges and deflection had increased by 17%.

**APPENDIX I (a) HMC Sample Details Before Treatment**

Sample Number	Orig. Piece No	Calc. ODW (g)	Dry Before Decay			Wet Before Decay			Wet After Decay		
			MC %	Defl. (mm)	MOEp GPa	MC %	Defl. (mm)	MOEp GPa	MC %	Defl. (mm)	MOEp GPa
<b>8-week predecay, Copper naphthenate treatment 1 edge, High moisture content</b>											
C61H/1	1181	1738	11.9	1.89	11.12	38	2.23	8.57	41	2.20	8.57
C61H/2	1191	1695	9.5	1.96	10.80	37	2.28	8.29	36	2.28	8.25
C61H/3	1203	1648	9.8	1.99	10.59	38	2.30	8.39	38	2.18	8.72
C61H/4	1172	1667	10.7	2.19	9.64	51	2.38	7.94	52	2.34	8.16
C61H/5	1161	1909	9.8	2.01	10.37	38	2.54	7.13	36	2.64	6.81
C61H/6	1111	1857	12.2	2.71	7.75	34	3.82	4.99	31	3.65	5.26
C61H/7	1192	1618	9.8	2.12	9.98	32	2.47	7.69	31	2.42	7.59
C61H/8	1104	1967	10.9	1.98	10.62	38	2.50	7.59	35	2.64	7.20
C61H/9	974	1481	11.5	2.56	8.18	42	3.13	5.86	40	3.09	5.89
C61H/10	982	1983	10.5	1.63	12.63	33	1.79	10.31	33	1.80	10.03
C61H/11	1024	1623	12.1	2.31	8.95	36	2.65	7.09	35	2.75	6.85
C61H/12	1062	1801	12.3	1.86	11.05	48	2.20	8.07	46	2.24	7.80
C61H/13	942	1780	6.5	2.19	9.45	39	2.43	7.81	37	2.44	7.89
C61H/14	963	1820	11.9	1.71	12.12	40	1.93	9.49	38	1.97	9.03
C61H/15	1132	1774	10.8	1.79	11.65	31	1.93	9.67	33	1.85	10.03
C61H/16	1043	1809	13.2	1.87	11.15	40	2.00	9.50	37	1.98	9.52
C61H/17	1085	1958	10.8	2.24	9.21	21	2.68	7.51	27	2.86	6.92
C61H/18	1032	1919	10.3	1.68	12.40	29	1.97	9.42	31	1.96	9.28
C61H/19	1003	1443	12.4	2.46	8.42	34	2.79	6.98	33	2.78	6.98
C61H/20	1013	1595	9.8	2.15	9.64	37	2.51	7.76	39	2.56	7.49
<b>Average</b>			<b>10.8</b>	<b>2.07</b>	<b>10.29</b>	<b>37</b>	<b>2.43</b>	<b>8.00</b>	<b>36</b>	<b>2.43</b>	<b>7.91</b>
<b>8-week predecay, Copper naphthenate treatment 2 edges, High moisture content</b>											
C62H/1	933	1817	11.0	1.71	12.17	33	2.08	8.83	33	2.20	8.26
C62H/2	911	1637	10.4	1.99	10.60	40	2.37	7.88	36	2.48	7.50
C62H/3	953	1907	13.5	1.57	13.15	42	1.86	9.92	40	1.88	9.72
C62H/4	1002	1466	12.3	2.64	7.90	42	3.13	6.19	48	3.08	6.26
C62H/5	1103	1958	11.2	1.72	12.03	39	1.88	9.79	39	1.83	10.19
C62H/6	1053	1566	10.2	2.25	9.30	39	2.65	7.06	37	2.69	6.99
C62H/7	1145	1778	9.6	1.89	11.05	30	2.27	8.45	31	2.38	7.90
C62H/8	894	1775	10.3	2.48	8.41	35	3.00	6.51	36	3.04	6.35
C62H/9	882	1972	12.2	1.44	14.39	36	1.66	11.25	35	1.63	11.00
C62H/10	892	1606	10.6	2.15	9.71	44	2.60	7.10	41	2.60	7.26
C62H/11	832	1593	12.0	2.01	10.31	43	2.22	8.40	38	2.33	8.11
C62H/12	803	1490	11.5	2.60	8.04	40	3.16	6.13	37	3.22	6.07
C62H/13	783	1745	10.5	2.55	8.20	46	3.24	5.99	43	3.26	5.67
C62H/14	815	1680	10.8	1.78	11.89	33	1.81	10.50	32	2.08	9.01
C62H/15	822	1678	11.5	1.91	10.83	43	2.16	8.47	39	2.20	8.21
C62H/16	864	1564	11.8	2.29	9.25	44	2.62	7.43	45	2.65	7.24
C62H/17	841	1759	12.3	1.83	11.31	40	1.93	9.87	40	1.91	9.74
C62H/18	921	1605	13.8	2.32	9.03	41	2.77	6.85	39	2.87	6.49
C62H/19	685	1932	14.7	1.78	11.88	32	1.83	10.54	32	1.95	9.59
C62H/20	692	1717	12.9	1.81	11.59	47	2.02	9.21	46	2.06	9.05
<b>Average</b>			<b>11.7</b>	<b>2.04</b>	<b>10.55</b>	<b>40</b>	<b>2.36</b>	<b>8.32</b>	<b>38</b>	<b>2.42</b>	<b>8.03</b>

**APPENDIX I (a) contd. HMC Sample Details Before Treatment**

Sample Number	Orig. Piece No	Calc. ODW (g)	Dry Before Decay			Wet Before Decay			Wet After Decay		
			MC %	Defl. (mm)	MOEp GPa	MC %	Defl. (mm)	MOEp GPa	MC %	Defl. (mm)	MOEp GPa
<b>8-week predecay, Copper naphthenate treatment 1 face+2 edges, High moisture content</b>											
C63H/1	441	1715	11.7	1.34	15.76	33	1.80	10.70	32	1.75	10.57
C63H/2	451	1713	11.2	1.94	10.80	36	2.25	8.54	66	2.34	8.16
C63H/3	393	1675	12.2	1.86	11.16	41	2.16	8.77	37	2.08	9.21
C63H/4	474	1685	11.3	1.78	11.65	39	2.11	8.54	35	2.11	8.45
C63H/5	481	1607	12.1	2.51	8.39	44	3.12	6.27	40	3.01	6.41
C63H/6	492	1782	12.3	1.49	13.73	34	1.95	9.29	33	1.85	9.63
C63H/7	431	1709	11.2	2.00	10.69	37	2.46	7.79	36	2.40	7.83
C63H/8	423	1781	11.8	2.17	9.58	39	2.68	6.95	34	2.54	7.27
C63H/9	412	1827	11.9	1.55	13.49	36	1.78	10.54	35	1.72	10.69
C63H/10	403	1854	12.0	1.64	12.83	31	2.03	9.36	32	1.93	9.58
C63H/11	383	1892	11.7	1.79	11.82	31	1.85	10.29	32	1.75	10.56
C63H/12	373	1513	11.1	2.50	8.41	34	2.87	6.87	32	2.80	7.17
C63H/13	362	1721	13.2	2.37	8.83	32	2.78	6.92	32	2.71	6.96
C63H/14	354	1968	11.5	1.58	13.30	28	1.76	11.14	29	1.59	11.51
C63H/15	342	1614	13.1	1.62	12.92	34	2.38	8.37	33	2.33	8.43
C63H/16	332	1736	12.5	1.73	12.10	29	2.03	9.51	31	1.95	9.51
C63H/17	213	1804	11.9	1.68	12.39	31	1.95	9.63	32	1.79	10.51
C63H/18	241	1770	12.7	1.93	10.82	37	2.08	9.28	38	2.03	9.63
C63H/19	232	1801	14.0	1.54	13.56	34	1.98	9.57	32	1.90	9.65
C63H/20	261	1598	13.6	2.73	7.71	41	3.25	6.19	37	3.11	6.49
<b>Average</b>			<b>12.2</b>	<b>1.89</b>	<b>11.50</b>	<b>35</b>	<b>2.26</b>	<b>8.73</b>	<b>35</b>	<b>2.18</b>	<b>8.91</b>
<b>8-week predecay, Copper naphthenate treatment 4 sides, High moisture content</b>											
C64H/1	252	1846	13.6	1.72	12.22	34	1.86	10.14	32	1.96	9.63
C64H/2	271	1688	13.2	1.78	11.73	44	2.09	8.77	38	1.99	9.25
C64H/3	291	1764	11.8	2.12	9.99	38	2.40	7.77	41	2.38	7.69
C64H/4	301	1888	13.1	1.80	11.60	31	2.12	9.20	34	2.03	9.19
C64H/5	315	1467	13.0	2.16	9.60	35	2.46	7.99	33	2.52	7.64
C64H/6	323	1911	12.2	2.80	7.50	31	3.64	5.51	30	3.56	5.72
C64H/7	223	1705	12.0	2.06	10.20	33	2.29	8.20	31	2.24	8.43
C64H/8	172	1586	12.8	1.68	12.26	37	1.95	9.97	34	1.92	9.71
C64H/9	182	1781	13.6	1.57	13.30	29	1.77	10.82	31	1.65	11.35
C64H/10	151	1932	12.2	1.40	14.91	30	1.55	12.29	31	1.56	11.72
C64H/11	161	1616	12.5	2.57	8.19	43	3.11	6.23	37	3.14	6.26
C64H/12	61	1729	12.2	1.90	10.92	27	2.18	8.91	29	2.05	9.26
C64H/13	201	1789	12.6	1.75	11.94	31	1.90	10.17	32	1.90	10.01
C64H/14	33	1736	13.1	2.10	10.02	31	2.47	7.81	31	2.46	7.77
C64H/15	12	1739	12.1	2.29	9.12	36	2.80	6.86	32	2.66	7.25
C64H/16	23	2011	11.8	1.47	14.22	27	1.78	10.70	30	1.72	11.09
C64H/17	22	2093	11.7	1.46	14.32	26	1.68	11.58	30	1.60	11.85
C64H/18	144	1428	12.6	2.33	8.99	36	2.57	7.62	33	2.48	7.74
C64H/19	131	1688	12.9	1.95	10.67	35	2.25	8.57	32	2.18	8.67
C64H/20	111	1521	12.2	2.12	9.97	41	2.43	7.98	36	2.44	7.92
<b>Average</b>			<b>12.6</b>	<b>1.95</b>	<b>11.08</b>	<b>34</b>	<b>2.27</b>	<b>8.85</b>	<b>33</b>	<b>2.22</b>	<b>8.91</b>

**APPENDIX I (a) contd. HMC Sample Details Before Treatment**

Sample Number	Orig. Piece No	Calc. ODW (g)	Dry Before Decay			Wet Before Decay			Wet After Decay		
			MC %	Defl. (mm)	MOEp GPa	MC %	Defl. (mm)	MOEp GPa	MC %	Defl. (mm)	MOEp GPa
<b>8-week predecay, Boron treatment 1 edge, High moisture content</b>											
B61H/1	1084	2012	10.9	2.06	10.08	25	2.38	8.44	28	2.50	7.80
B61H/2	1131	1780	9.8	1.78	11.92	31	1.91	9.89	31	1.94	9.79
B61H/3	1091	2030	11.3	1.67	12.41	34	1.62	11.63	32	1.53	11.76
B61H/4	1183	1719	11.9	1.92	10.95	35	2.22	8.71	35	2.19	8.70
B61H/5	1071	1923	10.7	1.82	11.40	29	2.11	9.20	29	2.19	8.75
B61H/6	1152	1857	11.8	1.67	12.30	30	1.89	10.01	32	1.86	10.01
B61H/7	1064	1802	12.1	1.67	12.39	39	1.90	9.51	37	1.92	9.24
B61H/8	981	1922	10.1	1.91	11.01	35	2.30	8.05	35	2.28	8.13
B61H/9	1023	1675	12.0	1.98	10.44	42	2.19	8.61	40	2.22	8.50
B61H/10	1052	1615	11.0	2.12	9.78	36	2.64	7.18	38	2.57	7.21
B61H/11	993	1706	11.3	2.84	7.23	36	3.60	5.34	39	3.58	5.46
B61H/12	934	1814	11.5	1.93	10.73	29	2.30	8.12	31	2.27	7.87
B61H/13	954	1686	14.8	2.12	9.63	41	2.36	7.79	41	2.38	7.72
B61H/14	964	1837	11.1	1.58	13.32	44	1.78	10.21	42	1.79	9.93
B61H/15	1141	1849	10.0	2.21	9.57	30	2.71	7.12	33	2.63	7.06
B61H/16	941	1745	10.8	2.30	9.27	35	2.61	7.59	33	2.58	7.38
B61H/17	901	1624	10.0	1.87	10.99	36	2.26	8.06	37	2.43	7.47
B61H/18	973	1481	11.9	2.39	8.67	32	2.83	6.61	35	2.86	6.50
B61H/19	912	1641	11.1	1.90	11.08	39	2.22	8.50	37	2.38	7.91
B61H/20	922	1608	13.2	2.20	9.58	39	2.54	7.53	40	2.63	7.24
<b>Average</b>			<b>11.4</b>	<b>2.00</b>	<b>10.64</b>	<b>35</b>	<b>2.32</b>	<b>8.41</b>	<b>35</b>	<b>2.34</b>	<b>8.22</b>
<b>8-week predecay, Boron treatment 2 edges, High moisture content</b>											
B62H/1	883	2012	12.8	1.41	14.66	33	1.61	11.34	32	1.56	11.48
B62H/2	873	1891	12.2	2.49	8.26	31	2.85	6.73	30	2.88	6.67
B62H/3	831	1595	12.0	1.98	10.40	41	2.10	8.97	36	2.12	8.91
B62H/4	852	1550	11.0	3.06	6.82	33	3.80	5.12	35	3.88	5.16
B62H/5	863	1523	12.6	2.60	7.92	45	2.94	6.48	42	2.97	6.44
B62H/6	821	1686	11.7	1.88	11.02	41	2.06	9.00	37	2.11	8.67
B62H/7	814	1678	11.9	1.76	11.82	36	1.82	10.29	33	1.94	9.45
B62H/8	842	1718	13.2	1.87	10.98	35	2.01	9.50	34	1.99	9.37
B62H/9	781	1729	10.4	2.66	7.97	39	3.60	5.38	38	3.78	5.01
B62H/10	761	1493	11.1	2.84	7.36	42	3.48	5.49	45	3.42	5.65
B62H/11	752	1769	13.5	1.62	12.85	36	1.71	11.03	33	1.70	11.04
B62H/12	744	1583	13.1	2.96	7.09	34	3.25	6.08	33	3.27	5.99
B62H/13	733	1891	11.5	1.69	12.16	35	1.88	9.82	35	1.87	9.86
B62H/14	673	1676	11.0	1.96	10.42	42	2.09	8.48	39	2.03	8.80
B62H/15	662	1633	11.3	2.11	9.82	37	2.46	7.59	34	2.53	7.34
B62H/16	652	1722	11.8	1.59	13.02	33	1.79	10.45	32	1.81	10.40
B62H/17	792	1717	11.6	1.85	11.34	37	1.90	9.67	35	1.91	9.73
B62H/18	771	1823	11.7	1.79	11.50	37	1.99	9.08	35	2.11	8.55
B62H/19	642	1593	11.1	2.58	8.11	32	3.08	6.51	32	3.12	6.46
B62H/20	635	1739	12.5	1.84	11.26	37	2.02	9.31	35	1.95	9.77
<b>Average</b>			<b>11.9</b>	<b>2.13</b>	<b>10.24</b>	<b>37</b>	<b>2.42</b>	<b>8.32</b>	<b>35</b>	<b>2.45</b>	<b>8.24</b>



**APPENDIX I (a) contd. HMC Sample Details Before Treatment**

Sample Number	Orig. Piece No	Calc. ODW (g)	Dry Before Decay			Wet Before Decay			Wet After Decay		
			MC %	Defl. (mm)	MOEp GPa	MC %	Defl. (mm)	MOEp GPa	MC %	Defl. (mm)	MOEp GPa
<b>8-week predecay, Boron treatment 1 face+2 edges, High moisture content</b>											
B63H/1	355	1974	12.3	1.58	13.20	28	1.70	11.21	29	1.60	11.84
B63H/2	361	1746	13.6	2.36	8.86	31	2.94	6.74	34	2.89	6.58
B63H/3	331	1840	13.1	1.53	13.69	30	1.77	10.59	31	1.68	10.87
B63H/4	341	1713	14.0	1.86	11.33	35	2.05	9.26	32	2.08	8.99
B63H/5	374	1568	11.7	2.23	9.42	37	2.72	7.42	33	2.77	7.39
B63H/6	384	1888	12.0	1.67	12.52	32	1.67	11.18	32	1.82	9.87
B63H/7	404	1848	12.3	1.78	11.81	31	2.18	8.80	31	2.02	9.24
B63H/8	411	1838	12.1	1.62	12.99	34	1.78	10.56	33	1.76	10.10
B63H/9	424	1748	12.4	2.46	8.50	38	3.01	6.23	36	2.88	6.56
B63H/10	433	1538	12.5	1.81	11.72	39	2.22	8.60	35	2.26	8.48
B63H/11	251	1868	13.2	1.65	12.75	36	1.87	10.18	31	1.93	10.06
B63H/12	272	1664	13.2	1.78	11.64	42	2.09	8.86	39	2.00	9.22
B63H/13	292	1869	12.5	1.77	11.86	38	1.88	9.86	35	1.91	9.75
B63H/14	302	1867	13.6	1.70	12.27	33	2.04	9.28	31	1.92	9.60
B63H/15	314	1476	13.1	2.28	9.16	36	2.71	7.38	33	2.72	7.15
B63H/16	281	1684	14.5	2.14	9.89	38	2.51	7.60	36	2.47	7.46
B63H/17	214	1762	11.7	1.87	11.12	35	2.25	8.39	33	2.24	8.23
B63H/18	242	1734	13.0	2.18	9.70	38	2.63	7.52	34	2.56	7.74
B63H/19	233	1764	13.8	1.60	13.05	37	1.90	9.81	34	1.88	9.66
B63H/20	264	1642	14.4	2.48	8.35	39	2.95	6.19	35	2.79	6.53
<b>Average</b>			<b>13.0</b>	<b>1.92</b>	<b>11.19</b>	<b>35</b>	<b>2.24</b>	<b>8.78</b>	<b>33</b>	<b>2.21</b>	<b>8.77</b>
<b>8-week predecay, Boron treatment 4 sides, High moisture content</b>											
B64H/1	224	1668	11.9	2.19	9.60	31	2.54	7.61	30	2.44	7.99
B64H/2	62	1816	12.6	1.76	11.77	25	2.04	9.48	29	1.87	9.93
B64H/3	162	1642	12.9	2.18	9.64	40	2.56	7.54	34	2.63	7.16
B64H/4	173	1594	12.7	1.64	12.56	32	1.92	10.01	32	1.91	9.94
B64H/5	191	1811	12.1	1.87	11.15	40	2.16	8.53	36	2.26	8.21
B64H/6	114	1587	13.4	1.93	10.83	42	2.24	8.24	42	2.13	8.73
B64H/7	181	1772	13.1	1.75	11.96	35	2.03	9.33	35	2.01	9.28
B64H/8	123	1574	14.1	2.32	9.06	39	2.73	7.10	35	2.71	7.27
B64H/9	132	1690	12.8	1.92	10.84	37	2.29	8.17	34	2.20	8.63
B64H/10	103	1692	11.9	2.07	10.09	32	2.36	8.32	30	2.33	8.18
B64H/11	93	1835	13.3	1.62	12.99	28	1.79	10.76	30	1.84	10.15
B64H/12	34	1621	20.6	2.16	9.73	45	2.62	7.12	46	2.64	6.99
B64H/13	143	1464	12.3	2.01	10.50	39	2.25	8.58	35	2.20	8.44
B64H/14	83	1758	12.4	2.10	9.88	38	2.40	8.00	35	2.43	7.72
B64H/15	72	1839	13.1	1.68	12.63	29	1.98	10.05	32	2.00	9.57
B64H/16	51	1795	12.9	2.07	10.03	36	2.44	7.93	35	2.38	8.09
B64H/17	45	1483	12.7	2.28	9.25	40	2.75	7.18	36	2.76	7.07
B64H/18	104	1711	11.3	1.92	10.75	28	2.10	9.38	29	2.04	9.43
B64H/19	202	1761	13.0	1.71	12.03	31	1.81	10.42	31	1.75	10.65
B64H/20	11	1779	11.9	2.09	10.01	42	2.55	7.66	39	2.37	8.09
<b>Average</b>			<b>13.0</b>	<b>1.96</b>	<b>10.77</b>	<b>35</b>	<b>2.28</b>	<b>8.57</b>	<b>34</b>	<b>2.25</b>	<b>8.58</b>

**APPENDIX I (a) contd. HMC Sample Details Before Treatment**

Sample Number	Orig. Piece No	Calc. ODW (g)	Dry Before Decay			Wet Before Decay			Wet After Decay		
			MC %	Defl. (mm)	MOEp GPa	MC %	Defl. (mm)	MOEp GPa	MC %	Defl. (mm)	MOEp GPa
<b>4-week predecay, Copper naphthenate treatment 1 edge, High moisture content</b>											
C31H/1	1193	1624	10.7	2.08	9.97	30	2.48	7.77	29	2.44	7.90
C31H/2	1182	1707	13.0	1.77	11.72	31	2.12	9.23	30	2.13	9.10
C31H/3	1201	1670	10.7	2.66	7.81	35	3.58	5.25	32	3.42	5.47
C31H/4	1171	1621	11.5	2.08	9.93	41	2.50	7.59	40	2.52	7.73
C31H/5	1112	1862	11.2	2.74	7.59	34	3.70	5.26	31	3.71	5.30
C31H/6	1162	1941	10.8	1.87	11.22	33	2.35	8.05	31	2.29	8.15
C31H/7	1093	1997	11.8	1.82	11.23	28	2.08	9.31	29	2.02	9.62
C31H/8	1082	2008	10.9	1.72	12.06	22	2.00	9.84	25	1.95	9.81
C31H/9	1042	1761	13.3	2.02	10.33	38	2.28	8.17	32	2.24	8.46
C31H/10	1073	2043	10.9	1.40	14.93	22	1.63	11.80	25	1.61	11.65
C31H/11	1012	1595	10.4	1.89	10.95	27	2.19	8.69	29	2.12	8.84
C31H/12	84	1811	11.5	1.99	10.50	36	2.31	8.14	36	2.32	8.00
C31H/13	1063	1769	12.2	1.71	12.12	35	1.97	9.30	33	1.95	9.35
C31H/14	1022	1724	12.0	1.79	11.56	29	2.01	9.55	29	1.98	9.71
C31H/15	972	1490	11.5	2.75	7.58	36	3.51	5.37	35	3.48	5.36
C31H/16	984	1768	10.7	1.95	10.68	31	2.67	7.14	31	2.59	7.26
C31H/17	914	1691	11.7	1.85	11.18	33	2.21	8.70	32	2.25	8.68
C31H/18	1134	1764	11.3	1.75	11.67	29	1.97	9.60	28	1.93	9.79
C31H/19	944	1710	11.8	2.38	8.81	31	2.95	6.47	30	2.99	6.36
C31H/20	1004	1456	12.3	2.30	9.13	33	2.63	7.43	31	2.66	7.27
<b>Average</b>			<b>11.5</b>	<b>2.03</b>	<b>10.55</b>	<b>32</b>	<b>2.46</b>	<b>8.13</b>	<b>31</b>	<b>2.43</b>	<b>8.19</b>
<b>4-week predecay, Copper naphthenate treatment 2 edges, High moisture content</b>											
C32H/1	971	1553	11.1	2.87	7.32	38	3.65	4.99	32	3.53	5.18
C32H/2	913	1658	12.7	1.85	11.09	34	2.24	8.50	31	2.22	8.46
C32H/3	902	1665	11.8	1.93	10.60	36	2.26	7.94	32	2.19	8.17
C32H/4	983	1923	11.5	1.84	11.07	32	2.09	8.65	31	1.99	9.14
C32H/5	1173	1697	12.1	1.88	10.91	37	2.19	8.57	34	2.21	8.59
C32H/6	1194	1664	11.1	2.07	10.02	26	2.40	8.10	27	2.32	8.23
C32H/7	1202	1697	11.0	2.14	9.76	28	2.62	7.26	28	2.44	7.71
C32H/8	1101	1995	10.9	1.96	10.66	32	2.70	7.02	29	2.43	7.72
C32H/9	1061	1817	12.3	2.05	10.16	34	2.50	7.38	34	2.41	7.53
C32H/10	1121	1901	10.6	1.65	12.74	21	1.88	10.47	24	1.81	10.68
C32H/11	1041	1795	12.7	1.70	12.39	35	1.98	9.44	32	1.95	9.56
C32H/12	1021	1678	11.8	1.79	11.73	28	2.02	9.41	29	2.02	9.40
C32H/13	1081	1987	10.7	1.76	11.80	18	2.15	9.16	26	2.12	8.86
C32H/14	932	1789	11.2	1.78	11.73	27	2.16	8.73	28	2.05	8.96
C32H/15	1133	1796	12.1	1.82	11.41	25	1.99	9.53	27	1.85	10.03
C32H/16	1033	1888	11.5	1.96	10.52	24	2.30	8.29	26	2.17	8.79
C32H/17	1005	1429	12.1	2.38	8.71	29	2.80	6.78	30	2.69	6.98
C32H/18	1011	1622	10.8	1.85	11.24	22	2.11	9.20	25	2.02	9.31
C32H/19	1074	1983	11.2	1.58	13.13	23	1.79	10.74	26	1.80	10.43
C32H/20	951	1916	14.2	1.52	13.57	30	1.67	11.56	29	1.72	11.35
<b>Average</b>			<b>11.7</b>	<b>1.92</b>	<b>11.03</b>	<b>29</b>	<b>2.28</b>	<b>8.59</b>	<b>29</b>	<b>2.20</b>	<b>8.75</b>

**APPENDIX I (a) contd. HMC Sample Details Before Treatment**

Sample Number	Orig. Piece No	Calc. ODW (g)	Dry Before Decay			Wet Before Decay			Wet After Decay		
			MC %	Defl. (mm)	MOEp GPa	MC %	Defl. (mm)	MOEp GPa	MC %	Defl. (mm)	MOEp GPa
<b>4-week predecay, Copper naphthenate treatment 1 face+2 edges, High moisture content</b>											
C33H/1	1142	1819	11.0	2.15	9.65	25	2.55	7.71	27	2.50	7.60
C33H/2	992	1673	11.8	2.77	7.36	27	3.64	5.29	29	3.64	5.17
C33H/3	943	1755	12.6	2.18	9.47	30	2.66	7.30	31	2.51	7.66
C33H/4	952	1946	15.1	1.59	13.19	34	1.78	10.75	31	1.82	10.50
C33H/5	1102	2014	11.0	1.60	12.95	30	1.83	10.47	31	1.80	10.40
C33H/6	931	1799	11.3	2.03	10.31	31	2.53	7.82	29	2.45	7.94
C33H/7	962	1842	11.8	1.87	11.23	35	2.15	8.56	35	2.15	8.36
C33H/8	924	1636	15.5	1.96	10.56	38	2.15	8.97	34	2.16	9.01
C33H/9	872	1866	8.1	2.27	9.12	28	2.71	7.34	27	2.63	7.41
C33H/10	884	2091	13.1	1.41	14.68	27	1.62	11.44	28	1.53	11.70
C33H/11	891	1598	11.6	2.08	9.89	34	2.55	7.32	32	2.46	7.58
C33H/12	834	1608	12.9	2.08	10.03	33	2.46	8.01	32	2.40	8.11
C33H/13	862	1547	13.4	2.90	7.20	42	3.64	5.35	39	3.62	5.39
C33H/14	824	1623	13.1	2.22	9.32	44	2.73	6.99	41	2.71	7.08
C33H/15	843	1717	13.7	2.02	10.18	29	2.27	8.55	29	2.22	8.61
C33H/16	802	1539	12.9	2.68	7.85	31	3.34	5.99	30	3.32	5.85
C33H/17	812	1634	12.6	1.93	10.72	31	2.33	8.35	31	2.23	8.42
C33H/18	784	1748	11.2	2.50	8.25	38	3.16	5.97	36	3.14	5.89
C33H/19	762	1509	11.4	2.59	8.17	36	3.44	5.66	34	3.24	6.04
C33H/20	755	1761	13.7	1.84	11.40	28	2.05	9.37	29	2.03	9.21
<b>Average</b>			<b>12.4</b>	<b>2.13</b>	<b>10.08</b>	<b>33</b>	<b>2.58</b>	<b>7.86</b>	<b>32</b>	<b>2.53</b>	<b>7.90</b>
<b>4-week predecay, Copper naphthenate treatment 4 sides, High moisture content</b>											
C34H/1	654	1756	13.3	1.60	12.72	28	1.87	10.11	32	1.82	10.52
C34H/2	531	1576	12.6	2.72	7.56	41	3.35	5.54	38	3.27	5.72
C34H/3	503	1577	13.2	2.60	7.85	32	3.13	6.23	33	3.09	6.25
C34H/4	511	1737	14.9	1.99	10.40	39	2.27	8.36	39	2.21	8.55
C34H/5	494	1830	13.5	1.78	11.54	32	2.15	8.60	32	2.06	9.03
C34H/6	455	1997	12.3	2.13	9.81	27	2.66	7.08	30	2.48	7.52
C34H/7	563	1633	13.0	1.88	11.18	36	2.24	8.60	37	2.65	7.33
C34H/8	484	1684	13.4	2.44	8.50	30	2.75	6.87	30	2.70	7.02
C34H/9	471	1722	12.3	1.91	10.77	35	2.06	9.12	35	2.10	8.81
C34H/10	461	1608	15.7	2.50	8.28	41	2.94	6.59	41	3.03	6.38
C34H/11	444	1802	13.2	1.71	12.36	26	2.04	9.51	30	2.02	9.24
C34H/12	643	1557	11.4	2.48	8.46	23	3.14	6.52	29	3.00	6.73
C34H/13	333	1873	14.2	1.59	13.04	30	1.86	10.14	31	1.83	10.10
C34H/14	435	1489	14.0	2.07	9.99	35	2.52	7.69	36	2.48	7.96
C34H/15	422	1783	13.3	2.19	9.54	38	2.68	6.93	39	2.60	7.13
C34H/16	414	1806	12.8	1.62	12.90	34	1.84	10.42	34	1.75	10.84
C34H/17	402	1869	13.2	1.63	12.67	30	2.00	9.35	31	1.87	9.89
C34H/18	392	1737	13.6	1.59	13.04	36	1.74	10.67	37	1.66	11.13
C34H/19	382	1899	13.2	1.70	12.20	31	1.86	10.09	33	1.68	10.92
C34H/20	372	1540	12.5	2.35	8.89	31	2.72	7.26	32	2.71	7.31
<b>Average</b>			<b>13.3</b>	<b>2.02</b>	<b>10.59</b>	<b>33</b>	<b>2.39</b>	<b>8.28</b>	<b>34</b>	<b>2.35</b>	<b>8.42</b>

**APPENDIX I (a) contd. HMC Sample Details Before Treatment**

Sample Number	Orig. Piece No	Calc. ODW (g)	Dry Before Decay			Wet Before Decay			Wet After Decay		
			MC %	Defl. (mm)	MOEp GPa	MC %	Defl. (mm)	MOEp GPa	MC %	Defl. (mm)	MOEp GPa
<b>4-week predecay, Boron treatment 1 edge, High moisture content</b>											
B31H/1	1143	1782	10.3	1.86	11.13	22	2.17	9.05	27	2.18	8.69
B31H/2	961	1836	11.9	3.19	6.63	43	4.86	3.80	40	4.70	3.86
B31H/3	885	2053	12.3	1.65	12.64	34	1.96	9.31	32	1.94	9.22
B31H/4	871	1733	12.1	2.30	9.13	27	2.85	7.05	28	2.85	6.90
B31H/5	923	1624	15.3	2.08	10.11	35	2.47	8.00	31	2.46	7.95
B31H/6	833	1607	12.6	1.91	10.92	31	2.21	8.89	31	2.14	9.14
B31H/7	851	1556	10.9	2.70	7.83	28	3.29	6.06	30	3.11	6.39
B31H/8	861	1569	12.2	2.83	7.44	36	3.56	5.55	35	3.60	5.49
B31H/9	743	1592	12.6	2.38	8.83	31	2.75	6.95	30	2.71	7.01
B31H/10	732	1922	11.8	1.66	12.47	29	1.99	9.48	31	1.90	9.74
B31H/11	823	1676	12.2	1.87	11.14	36	2.13	8.78	35	2.14	8.75
B31H/12	722	1694	11.5	2.19	9.34	26	2.64	7.22	28	2.48	7.36
B31H/13	844	1742	12.7	1.91	10.85	28	2.20	8.61	31	2.14	8.61
B31H/14	711	1664	10.4	2.22	9.35	27	2.76	6.94	27	2.71	7.01
B31H/15	693	1735	12.9	1.75	11.84	30	2.12	9.10	29	2.06	9.18
B31H/16	801	1585	12.1	2.60	8.16	30	3.20	6.19	30	3.14	6.24
B31H/17	813	1647	12.1	1.79	11.48	30	2.08	9.29	31	2.00	9.35
B31H/18	682	1835	14.7	1.70	12.37	32	1.83	10.42	32	1.87	10.02
B31H/19	672	1697	11.5	1.98	10.30	31	2.14	8.89	31	2.08	8.81
B31H/20	73	1789	12.0	1.72	12.28	25	2.01	9.69	29	1.90	10.02
<b>Average</b>			<b>12.2</b>	<b>2.11</b>	<b>10.21</b>	<b>31</b>	<b>2.56</b>	<b>7.96</b>	<b>31</b>	<b>2.51</b>	<b>7.99</b>
<b>4-week predecay, Boron treatment 2 edges, High moisture content</b>											
B32H/1	782	1735	11.5	2.81	7.33	34	3.70	5.15	32	3.48	5.42
B32H/2	791	1761	11.9	1.87	11.13	35	2.12	8.73	35	1.97	9.25
B32H/3	754	1766	13.8	1.60	13.01	29	1.87	10.22	31	1.82	10.20
B32H/4	742	1662	12.8	1.98	10.63	35	2.38	7.95	32	2.35	8.09
B32H/5	731	1963	11.5	1.66	12.47	36	2.01	8.97	35	1.97	9.23
B32H/6	721	1760	10.5	2.01	10.42	29	2.29	8.42	28	2.17	8.66
B32H/7	702	1782	12.0	1.86	11.19	27	2.28	8.34	29	2.12	8.90
B32H/8	694	1742	12.9	1.97	10.59	36	2.45	7.82	35	2.43	7.78
B32H/9	681	1816	14.6	1.72	12.22	32	1.89	10.12	32	1.89	9.79
B32H/10	671	1630	10.9	2.23	9.22	30	2.48	7.78	28	2.36	8.13
B32H/11	561	1721	12.7	1.79	11.68	33	1.96	9.98	32	1.87	10.14
B32H/12	551	1997	12.9	1.60	13.06	37	1.85	10.00	33	1.76	10.34
B32H/13	582	1869	12.3	1.50	13.80	24	1.66	11.51	28	1.66	11.23
B32H/14	594	1878	12.5	1.76	11.96	29	2.09	9.26	30	2.06	9.31
B32H/15	603	1629	11.8	2.02	10.28	35	2.40	7.79	33	2.35	7.81
B32H/16	542	1457	11.6	2.72	7.61	35	3.60	5.32	33	3.49	5.57
B32H/17	612	1743	11.2	2.49	8.37	33	3.20	6.12	32	3.14	6.16
B32H/18	633	1789	12.2	1.93	10.82	31	2.35	8.25	31	2.19	8.62
B32H/19	53	1806	12.0	2.01	10.42	35	2.37	8.16	33	2.30	8.20
B32H/20	41	1495	11.6	2.37	8.99	41	3.12	6.11	39	3.26	5.82
<b>Average</b>			<b>12.2</b>	<b>2.00</b>	<b>10.76</b>	<b>33</b>	<b>2.40</b>	<b>8.30</b>	<b>32</b>	<b>2.33</b>	<b>8.43</b>

**APPENDIX I (a) contd. HMC Sample Details Before Treatment**

Sample Number	Orig. Piece No	Calc. ODW (g)	Dry Before Decay			Wet Before Decay			Wet After Decay		
			MC %	Defl. (mm)	MOEp GPa	MC %	Defl. (mm)	MOEp GPa	MC %	Defl. (mm)	MOEp GPa
<b>4-week predecay, Boron treatment 1 face+2 edges, High moisture content</b>											
B33H/1	663	1599	11.7	2.20	9.49	31	2.67	7.11	31	2.56	7.24
B33H/2	655	1843	12.2	1.52	13.63	27	1.80	10.46	29	1.72	10.85
B33H/3	532	1561	12.2	2.97	6.98	35	4.04	4.61	34	3.78	4.90
B33H/4	632	1813	12.0	1.81	11.56	30	2.00	9.45	29	1.86	10.21
B33H/5	613	1845	10.9	2.59	8.11	28	3.30	5.91	27	3.22	6.00
B33H/6	521	1781	12.7	2.17	9.64	31	2.62	7.46	31	2.60	7.42
B33H/7	512	1695	14.3	1.90	10.99	34	2.12	8.95	32	2.05	9.24
B33H/8	571	1816	11.6	2.15	9.67	32	2.56	7.37	32	2.57	7.13
B33H/9	493	1793	12.9	1.74	12.00	30	2.05	9.36	31	1.95	9.86
B33H/10	604	1615	11.8	1.97	10.61	32	2.27	8.35	31	2.21	8.53
B33H/11	485	1644	12.8	2.58	8.05	28	2.96	6.51	27	2.84	6.80
B33H/12	595	1861	12.5	1.67	12.43	26	2.00	9.73	28	2.01	9.48
B33H/13	472	1703	12.0	1.76	11.81	34	2.09	8.99	33	2.07	8.97
B33H/14	581	1837	11.9	1.45	14.21	24	1.66	11.59	27	1.60	11.62
B33H/15	552	1964	12.9	1.47	14.14	32	1.61	11.39	32	1.72	10.70
B33H/16	462	1630	15.0	2.37	8.76	36	2.98	6.46	34	2.95	6.54
B33H/17	453	1809	13.2	1.99	10.46	30	2.21	8.73	30	2.10	8.92
B33H/18	443	1744	14.4	1.68	12.32	30	1.84	10.36	31	1.80	10.42
B33H/19	623	1685	16.6	2.09	9.95	36	2.29	8.28	32	2.26	8.35
B33H/20	645	1546	11.3	2.24	9.23	25	2.68	7.44	27	2.65	7.53
<b>Average</b>			<b>12.7</b>	<b>2.02</b>	<b>10.70</b>	<b>31</b>	<b>2.39</b>	<b>8.43</b>	<b>30</b>	<b>2.33</b>	<b>8.54</b>
<b>4-week predecay, Boron treatment 4 sides, High moisture content</b>											
B34H/1	124	1623	12.9	2.43	8.67	36	3.02	6.29	33	2.93	6.41
B34H/2	91	1871	12.1	1.53	13.88	28	1.57	12.15	28	1.52	12.26
B34H/3	434	1469	13.2	1.88	11.12	35	2.22	8.81	33	2.24	8.61
B34H/4	322	1936	12.8	2.60	8.01	32	3.24	6.25	32	3.27	6.16
B34H/5	421	1809	12.3	2.01	10.41	32	2.32	8.52	31	2.20	8.76
B34H/6	313	1471	13.0	2.38	8.72	29	2.79	7.14	29	2.72	7.35
B34H/7	413	1791	12.4	1.56	13.40	34	1.68	11.09	33	1.68	10.93
B34H/8	305	1793	13.4	1.89	10.97	31	2.15	8.80	30	2.08	8.98
B34H/9	401	1816	12.2	1.79	11.68	27	1.95	9.92	29	1.91	9.93
B34H/10	391	1758	13.1	1.75	11.92	38	1.63	11.23	35	1.66	11.30
B34H/11	293	1822	12.5	1.66	12.66	29	1.88	9.99	29	1.79	10.48
B34H/12	282	1666	14.8	2.00	10.44	31	2.35	8.24	30	2.30	8.38
B34H/13	273	1671	13.2	1.67	12.50	32	1.89	10.12	31	1.80	10.55
B34H/14	371	1492	11.9	2.47	8.45	37	3.00	6.54	35	2.96	6.73
B34H/15	253	1868	13.3	1.75	11.80	32	1.89	9.77	32	1.75	10.56
B34H/16	364	1804	14.2	1.80	11.47	35	2.13	8.72	34	2.05	9.02
B34H/17	351	2125	12.0	1.66	12.76	32	1.79	10.53	31	1.71	10.72
B34H/18	343	1621	14.1	1.98	10.57	38	2.18	8.88	36	2.23	8.67
B34H/19	262	1635	13.9	2.32	9.05	38	2.77	7.01	34	2.72	7.17
B34H/20	243	1737	13.3	2.20	9.60	35	2.59	7.64	33	2.58	7.74
<b>Average</b>			<b>13.0</b>	<b>1.97</b>	<b>10.90</b>	<b>33</b>	<b>2.25</b>	<b>8.88</b>	<b>32</b>	<b>2.21</b>	<b>9.04</b>

**APPENDIX I (a) contd. HMC Sample Details Before Treatment**

Sample Number	Orig. Piece No	Calc. ODW (g)	Dry Before Decay			Wet Before Decay			Wet After Decay		
			MC %	Defl. (mm)	MOEp GPa	MC %	Defl. (mm)	MOEp GPa	MC %	Defl. (mm)	MOEp GPa
<b>4-week predecay, Boron H1.2 treatment, High moisture content</b>											
B3H/1	1213	1481	17.2	3.18	6.53	26	3.73	5.28	29	3.54	5.52
B3H/2	1282	1507	15.9	3.76	5.44	29	4.91	3.96	30	4.83	3.94
B3H/3	1253	1263	16.2	4.41	4.74	32	5.22	3.91	30	5.13	3.97
B3H/4	1243	1356	16.8	2.86	7.36	37	3.49	5.75	35	3.42	5.83
B3H/5	1242	1344	16.1	2.82	7.42	30	3.26	6.17	29	3.12	6.33
B3H/6	1262	1511	14.8	3.08	6.77	30	4.02	4.90	33	4.04	4.81
B3H/7	1264	1504	15.6	3.34	6.27	29	3.98	4.98	40	3.83	5.02
B3H/8	1212	1554	16.5	3.12	6.70	26	3.78	5.32	28	3.75	5.23
B3H/9	1222	1514	16.2	3.32	6.32	34	4.05	4.83	31	3.74	5.12
B3H/10	1261	1533	15.3	3.97	5.15	23	5.10	3.85	28	5.22	3.68
B3H/11	1263	1537	16.1	2.94	7.09	30	3.97	4.93	37	3.96	4.84
B3H/12	1271	1404	15.2	2.82	7.37	23	3.33	6.04	28	3.40	5.80
B3H/13	1283	1546	16.1	4.53	4.48	26	6.02	3.28	29	5.90	3.34
B3H/14	1234	1468	15.1	2.41	8.94	33	3.02	6.72	32	2.96	6.70
B3H/15	1211	1617	16.5	3.01	6.89	26	3.58	5.65	28	3.39	5.88
B3H/16	1231	1404	15.5	2.27	9.44	31	2.85	6.95	31	2.89	6.75
B3H/17	1223	1493	17.3	2.82	7.70	35	3.59	5.50	33	3.14	6.30
B3H/18	1254	1262	15.7	3.76	5.58	32	4.30	4.70	34	4.08	4.87
B3H/19	1241	1411	16.0	2.99	6.87	30	3.50	5.71	32	3.38	5.81
B3H/20	1255	1351	16.4	3.52	5.99	32	4.34	4.72	30	3.80	5.27
<b>Average</b>			<b>16.0</b>	<b>3.25</b>	<b>6.65</b>	<b>30</b>	<b>4.00</b>	<b>5.16</b>	<b>31</b>	<b>3.88</b>	<b>5.25</b>
<b>4-week predecay, Untreated controls, high moisture content</b>											
U3H/1	1135	1775	11.7	2.17	9.47	32	2.72	7.01	31	2.62	7.31
U3H/2	1092	2026	12.2	1.48	14.16	33	1.67	10.91	29	1.60	11.42
U3H/3	644	1579	11.9	1.68	12.37	30	2.35	8.33	30	2.31	8.39
U3H/4	295	1875	12.6	1.64	12.80	32	1.70	11.01	30	1.71	10.97
U3H/5	145	1545	14.8	1.94	10.68	38	2.19	8.58	33	2.15	8.70
U3H/6	265	1695	15.1	2.77	7.41	36	3.36	5.73	33	3.32	5.72
U3H/7	631	1821	12.1	1.77	11.90	30	2.01	9.60	29	1.87	10.54
U3H/8	853	1650	11.6	3.03	6.88	28	3.88	5.05	28	3.78	5.15
U3H/9	825	1662	12.5	2.30	9.00	47	2.78	6.56	43	2.79	6.61
U3H/10	1075	1985	11.0	1.70	12.45	23	1.91	10.34	26	1.92	10.04
U3H/11	991	1774	11.8	3.52	5.99	32	4.78	4.11	28	4.62	4.18
U3H/12	135	1830	14.3	1.98	10.40	31	2.28	8.37	28	2.29	8.46
U3H/13	304	1813	13.3	1.86	11.15	30	2.07	9.22	29	2.02	9.17
U3H/14	653	1727	12.2	1.66	12.47	30	1.88	10.07	30	1.83	10.19
U3H/15	1014	1624	10.4	1.98	10.45	30	2.34	7.90	30	2.29	8.14
U3H/16	1083	2038	11.8	1.87	10.94	20	2.07	9.61	24	2.14	9.10
U3H/17	592	1907	12.5	1.55	13.40	32	1.80	10.63	30	1.75	10.97
U3H/18	804	1472	12.4	2.45	8.52	29	2.92	6.65	29	2.84	6.82
U3H/19	893	1600	11.3	1.95	10.68	33	2.30	8.23	33	2.37	7.95
U3H/20	975	1490	11.8	2.35	8.82	38	2.83	6.52	33	2.69	6.76
<b>Average</b>			<b>12.4</b>	<b>2.08</b>	<b>10.50</b>	<b>32</b>	<b>2.49</b>	<b>8.22</b>	<b>30</b>	<b>2.45</b>	<b>8.33</b>

**APPENDIX I (a) contd. HMC Sample Details Before Treatment**

Sample Number	Orig. Piece No	Calc. ODW (g)	Dry Before Decay			Wet Before Decay			Wet After Decay		
			MC %	Defl. (mm)	MOEp GPa	MC %	Defl. (mm)	MOEp GPa	MC %	Defl. (mm)	MOEp GPa
<b>No Feeder Blocks, Untreated Moisture content controls, High moisture content</b>											
UMH/1	244	1738	13.7	2.43	8.51	36	2.88	6.66	34	2.82	6.86
UMH/2	1151	1806	11.7	1.69	12.33	29	2.00	9.60	27	1.98	9.73
UMH/3	881	1906	12.9	1.52	13.61	31	1.71	10.64	30	1.60	11.18
UMH/4	811	1653	11.4	2.95	7.13	33	3.40	5.49	32	3.26	5.71
UMH/5	483	1660	13.0	2.23	9.43	29	2.62	7.43	28	2.55	7.60
UMH/6	165	1724	13.5	2.70	7.78	37	3.40	5.66	34	3.32	5.84
UMH/7	1031	1940	11.8	1.60	12.75	26	1.85	10.14	27	1.75	10.55
UMH/8	955	1635	15.0	2.71	7.63	46	3.43	5.59	41	3.35	5.78
UMH/9	381	1932	12.1	1.80	11.43	27	2.02	9.53	29	1.93	9.54
UMH/10	684	1887	14.6	1.72	11.98	29	2.04	9.48	31	1.76	10.77
UMH/11	311	1558	12.3	2.60	8.11	29	3.35	6.04	30	3.12	6.53
UMH/12	112	1581	14.4	2.12	9.83	42	2.51	7.56	39	2.43	7.80
UMH/13	1051	1683	10.3	2.41	8.65	30	3.15	6.23	31	3.10	6.23
UMH/14	1122	1849	10.1	1.70	12.28	21	1.86	10.40	26	1.91	9.82
UMH/15	42	1594	14.4	2.06	10.06	41	2.49	7.53	40	2.40	7.99
UMH/16	353	2019	12.2	1.65	12.57	25	1.84	10.36	28	1.68	11.29
UMH/17	695	1752	12.7	2.15	9.83	37	2.58	7.46	35	2.66	7.25
UMH/18	1044	1889	14.4	1.84	11.17	37	1.95	9.55	36	1.87	10.02
UMH/19	1163	1963	10.9	1.66	12.36	30	2.04	9.01	29	1.96	9.21
UMH/20	1123	1936	10.6	1.75	11.93	24	2.01	9.63	26	1.96	9.57
<b>Average</b>			<b>12.6</b>	<b>2.06</b>	<b>10.47</b>	<b>32</b>	<b>2.46</b>	<b>8.20</b>	<b>32</b>	<b>2.37</b>	<b>8.46</b>

**APPENDIX I (b) LMC Sample Details Before Treatment**

Sample Number	Orig. Piece No	Calc. ODW (g)	Dry Before Decay			Wet Before Decay			Wet After Decay		
			MC %	Defl. (mm)	MOEp GPa	MC %	Defl. (mm)	MOEp GPa	MC %	Defl. (mm)	MOEp GPa
<b>12-week predecay, Copper naphthenate treatment 2 edges, Low moisture content</b>											
C62L/1	651	1741	11.3	1.60	12.88	37	1.76	10.54	37	1.76	10.76
C62L/2	661	1568	11.0	2.34	8.98	41	2.97	6.93	41	2.97	6.34
C62L/3	683	1865	14.9	1.64	12.73	34	1.76	10.79	34	1.76	10.68
C62L/4	691	1693	12.3	1.92	10.58	44	2.20	8.90	44	2.20	8.71
C62L/5	701	1845	11.4	2.22	9.41	36	2.76	6.96	36	2.76	6.75
C62L/6	723	1601	11.4	2.74	7.52	39	3.51	5.46	39	3.51	5.05
C62L/7	745	1552	13.1	3.07	6.79	37	3.65	5.01	37	3.65	5.05
C62L/8	751	1760	13.2	1.65	12.64	37	1.78	10.52	37	1.78	10.52
C62L/9	622	1691	17.1	2.40	8.65	43	2.69	7.12	43	2.69	7.14
C62L/10	541	1419	11.3	2.63	7.89	39	3.05	6.28	39	3.05	6.47
<b>Average</b>			<b>12.7</b>	<b>2.22</b>	<b>9.81</b>	<b>39</b>	<b>2.61</b>	<b>7.85</b>	<b>39</b>	<b>2.61</b>	<b>7.75</b>
<b>12-week predecay, Copper naphthenate treatment 4 sides, Low moisture content</b>											
C64L/1	602	1645	11.8	2.12	9.79	39	2.50	7.05	39	2.50	7.18
C64L/2	591	1861	12.4	1.75	11.81	35	2.00	9.32	35	2.00	9.60
C64L/3	573	1740	11.9	1.71	12.07	39	2.02	9.43	39	2.02	9.30
C64L/4	584	1898	11.7	1.40	14.85	32	1.52	12.58	32	1.52	12.31
C64L/5	554	1937	12.9	1.53	13.65	34	1.86	10.65	34	1.86	10.04
C64L/6	564	1728	12.2	1.79	11.68	35	2.00	9.80	35	2.00	9.61
C64L/7	534	1622	11.0	2.64	7.97	38	4.89	3.80	38	4.89	3.89
C64L/8	523	1689	12.8	2.50	8.31	33	3.06	6.32	33	3.06	6.35
C64L/9	513	1692	14.5	1.85	11.27	38	1.95	9.49	38	1.95	9.65
C64L/10	502	1699	12.4	2.53	8.21	36	3.14	6.23	36	3.14	6.13
<b>Average</b>			<b>12.3</b>	<b>1.98</b>	<b>10.96</b>	<b>36</b>	<b>2.49</b>	<b>8.47</b>	<b>36</b>	<b>2.49</b>	<b>8.41</b>
<b>12-week predecay, Boron treatment 2 edges, Low moisture content</b>											
B62L/1	562	1640	12.2	1.77	11.81	36	2.00	9.70	36	2.00	9.58
B62L/2	553	1975	13.1	1.50	13.83	33	1.79	10.96	33	1.79	10.10
B62L/3	583	1892	12.5	1.34	15.31	33	1.59	12.41	33	1.59	11.58
B62L/4	572	1768	12.2	1.77	11.89	36	2.08	9.09	36	2.08	8.85
B62L/5	593	1907	12.8	1.54	13.44	33	1.76	10.83	33	1.76	10.73
B62L/6	601	1630	11.5	2.33	8.96	39	2.89	6.41	39	2.89	6.39
B62L/7	641	1661	10.9	2.34	8.96	35	3.03	6.60	35	3.03	6.39
B62L/8	634	1763	12.4	1.71	12.20	35	2.01	9.16	35	2.01	9.53
B62L/9	621	1718	16.5	2.64	7.82	36	3.08	6.37	36	3.08	6.18
B62L/10	611	1739	10.8	2.92	7.09	35	4.10	5.01	35	4.10	4.71
<b>Average</b>			<b>12.5</b>	<b>1.99</b>	<b>11.13</b>	<b>35</b>	<b>2.43</b>	<b>8.66</b>	<b>35</b>	<b>2.43</b>	<b>8.41</b>
<b>12-week predecay, Boron treatment 4 sides, Low moisture content</b>											
B64L/1	491	1798	12.5	1.58	13.22	38	1.73	11.05	38	1.73	10.97
B64L/2	482	1637	13.1	2.29	9.12	39	2.62	7.33	39	2.62	7.39
B64L/3	473	1758	11.8	1.65	12.39	39	2.05	9.01	39	2.05	8.80
B64L/4	463	1573	14.9	2.17	9.62	39	2.54	7.56	39	2.54	7.67
B64L/5	452	1715	12.5	2.06	10.12	36	2.35	7.91	36	2.35	7.85
B64L/6	442	1681	12.7	1.70	12.30	36	1.92	8.69	36	1.92	9.57
B64L/7	533	1612	11.2	2.97	6.99	40	3.79	4.84	40	3.79	4.83
B64L/8	522	1811	12.3	2.27	9.11	31	2.73	7.16	31	2.73	7.05
B64L/9	514	1709	13.3	1.81	11.64	36	1.84	10.04	36	1.84	10.43
B64L/10	501	1837	11.8	2.37	8.84	35	2.91	6.82	35	2.91	6.41
<b>Average</b>			<b>12.6</b>	<b>2.09</b>	<b>10.33</b>	<b>37</b>	<b>2.45</b>	<b>8.04</b>	<b>37</b>	<b>2.45</b>	<b>8.10</b>



**APPENDIX I (b) contd. LMC Sample Details Before Treatment**

Sample Number	Orig. Piece No	Calc. ODW (g)	Dry Before Decay			Wet Before Decay			Wet After Decay		
			MC %	Defl. (mm)	MOEp GPa	MC %	Defl. (mm)	MOEp GPa	MC %	Defl. (mm)	MOEp GPa
<b>7-week predecay, Copper naphthenate treatment 2 edges, Low moisture content</b>											
C32L/1	263	1589	14.6	2.30	8.95	43	2.51	7.03	43	2.51	7.09
C32L/2	254	1884	13.5	1.78	11.60	37	1.97	9.36	37	1.97	9.24
C32L/3	274	1663	13.8	1.73	12.15	39	1.91	9.94	39	1.91	10.14
C32L/4	283	1684	15.3	1.97	10.60	36	2.26	8.48	36	2.26	8.52
C32L/5	294	1825	12.8	1.58	13.13	37	1.80	10.32	37	1.80	10.40
C32L/6	303	1879	13.8	1.57	13.23	35	1.96	9.87	35	1.96	9.43
C32L/7	312	1518	13.4	2.33	8.91	36	2.87	6.95	36	2.87	6.91
C32L/8	171	1584	13.3	1.62	12.99	38	1.84	10.20	38	1.84	10.14
C32L/9	363	1728	14.5	2.23	9.32	37	2.57	6.97	37	2.57	7.43
C32L/10	321	1986	13.4	2.57	8.04	37	3.29	6.22	37	3.29	6.08
<b>Average</b>			<b>13.8</b>	<b>1.97</b>	<b>10.89</b>	<b>38</b>	<b>2.30</b>	<b>8.53</b>	<b>38</b>	<b>2.30</b>	<b>8.54</b>
<b>7-week predecay, Copper naphthenate treatment 4 sides, Low moisture content</b>											
C34L/1	203	1753	12.9	1.75	11.94	33	1.95	10.20	33	1.95	9.42
C34L/2	65	1843	12.6	1.60	12.85	34	1.76	11.40	34	1.76	10.61
C34L/3	163	1605	12.8	2.10	9.89	37	2.42	7.72	37	2.42	7.88
C34L/4	152	1959	12.3	1.46	14.21	33	1.69	11.39	33	1.69	10.76
C34L/5	192	1789	12.8	1.83	11.47	41	2.18	8.57	41	2.18	8.52
C34L/6	245	1810	15.0	2.48	8.35	44	2.98	6.14	44	2.98	6.40
C34L/7	183	1725	13.8	1.65	12.57	35	1.86	10.00	35	1.86	10.08
C34L/8	231	1838	14.1	1.77	11.73	39	2.04	9.21	39	2.04	9.21
C34L/9	221	1662	12.3	2.62	8.20	41	3.14	6.17	41	3.14	6.37
C34L/10	211	1579	12.7	2.09	9.95	39	2.31	8.07	39	2.31	8.44
<b>Average</b>			<b>13.1</b>	<b>1.94</b>	<b>11.12</b>	<b>38</b>	<b>2.23</b>	<b>8.89</b>	<b>38</b>	<b>2.23</b>	<b>8.77</b>
<b>7-week predecay, Boron treatment 2 edges, Low moisture content</b>											
B32L/1	204	1750	12.9	1.75	11.77	33	2.12	9.81	33	2.12	8.85
B32L/2	63	1862	12.7	1.78	11.63	30	1.76	10.85	30	1.76	10.62
B32L/3	164	1685	12.7	2.30	9.15	34	2.73	6.88	34	2.73	7.03
B32L/4	193	1765	12.2	1.67	12.34	42	1.91	9.39	42	1.91	9.71
B32L/5	184	1687	13.7	1.85	11.29	34	2.00	9.26	34	2.00	9.58
B32L/6	153	1973	12.0	1.50	13.94	33	1.69	12.19	33	1.69	10.97
B32L/7	35	1702	13.9	2.60	7.91	38	3.20	5.97	38	3.20	5.85
B32L/8	222	1636	12.7	2.37	8.86	36	2.89	6.53	36	2.89	6.60
B32L/9	212	1729	13.2	1.81	11.45	34	2.20	8.95	34	2.20	8.64
B32L/10	24	2037	12.2	1.56	13.21	30	1.93	10.24	30	1.93	9.85
<b>Average</b>			<b>12.8</b>	<b>1.92</b>	<b>11.15</b>	<b>34</b>	<b>2.24</b>	<b>9.01</b>	<b>34</b>	<b>2.24</b>	<b>8.77</b>
<b>7-week predecay, Boron treatment 4 sides, Low moisture content</b>											
B34L/1	92	1799	13.3	1.67	12.34	31	1.73	11.09	31	1.73	11.21
B34L/2	101	1738	12.5	2.21	9.44	34	2.60	7.58	34	2.60	7.55
B34L/3	121	1569	13.9	1.97	10.69	36	2.36	8.36	36	2.36	8.17
B34L/4	113	1556	13.6	2.16	9.81	38	2.18	8.10	38	2.18	8.81
B34L/5	133	1699	13.7	1.93	10.75	36	2.24	8.47	36	2.24	8.61
B34L/6	13	1705	12.4	2.38	8.77	34	2.89	6.48	34	2.89	6.75
B34L/7	141	1329	13.3	2.57	8.14	36	3.09	6.23	36	3.09	6.48
B34L/8	82	1755	12.6	2.15	9.56	35	2.62	7.26	35	2.62	7.25
B34L/9	43	1630	13.5	1.95	10.65	38	2.24	7.77	38	2.24	8.66
B34L/10	52	1794	13.5	1.93	10.75	34	2.15	8.75	34	2.15	8.93
<b>Average</b>			<b>13.2</b>	<b>2.09</b>	<b>10.09</b>	<b>35</b>	<b>2.41</b>	<b>8.01</b>	<b>35</b>	<b>2.41</b>	<b>8.24</b>

**APPENDIX I (b) contd. LMC Sample Details Before Treatment**

Sample Number	Orig. Piece No	Calc. ODW (g)	Dry Before Decay			Wet Before Decay			Wet After Decay		
			MC %	Defl. (mm)	MOEp GPa	MC %	Defl. (mm)	MOEp GPa	MC %	Defl. (mm)	MOEp GPa
<b>4-week predecay, Boron H1.2 treatment, Low moisture content</b>											
B3L/1	1214	1500	16.7	4.12	5.01	36	3.96	4.76	36	3.96	4.82
B3L/2	1272	1463	14.7	3.35	6.22	33	3.86	5.05	33	3.86	5.06
B3L/3	1224	1490	16.2	2.32	9.41	39	2.69	7.28	39	2.69	7.35
B3L/4	1281	1497	15.3	3.03	6.94	39	3.81	5.35	39	3.81	5.12
B3L/5	1235	1407	15.2	2.37	8.98	37	3.18	6.64	37	3.18	6.23
B3L/6	1244	1424	15.4	2.68	7.98	38	3.28	6.12	38	3.28	5.98
B3L/7	1251	1299	14.1	3.35	6.23	32	4.31	4.61	32	4.31	4.53
B3L/8	1221	1429	15.3	3.09	6.89	40	4.04	4.79	40	4.04	4.62
B3L/9	1274	1351	14.4	3.17	6.51	46	6.28	5.72	46	6.28	3.02
B3L/10	1284	1478	15.0	4.65	4.37	22	3.49	3.08	22	3.49	5.42
<b>Average</b>			<b>15.2</b>	<b>3.21</b>	<b>6.85</b>	<b>36</b>	<b>3.89</b>	<b>5.34</b>	<b>36</b>	<b>3.89</b>	<b>5.21</b>
<b>4-week predecay, Untreated controls, Low moisture content</b>											
U3L/1	793	1656	11.9	1.68	12.32	36	1.74	10.46	36	1.74	10.62
U3L/2	915	1689	11.7	1.83	11.41	41	2.26	8.24	41	2.26	8.07
U3L/3	753	1775	13.4	1.55	13.53	33	1.71	10.83	33	1.71	10.90
U3L/4	432	1553	13.2	1.82	11.64	39	2.17	8.72	39	2.17	8.94
U3L/5	741	1644	13.1	2.04	10.25	31	2.32	7.69	31	2.32	7.90
U3L/6	945	1729	12.3	2.74	7.54	41	3.29	5.33	41	3.29	5.76
U3L/7	1001	1524	13.7	3.46	6.03	38	4.38	5.58	38	4.38	4.37
U3L/8	903	1637	11.5	1.96	10.46	42	2.38	7.79	42	2.38	7.45
U3L/9	1144	1779	10.8	1.92	10.77	34	2.39	8.18	34	2.39	7.83
U3L/10	1054	1588	11.5	2.05	10.09	38	2.64	7.85	38	2.64	7.01
<b>Average</b>			<b>12.3</b>	<b>2.11</b>	<b>10.40</b>	<b>37</b>	<b>2.53</b>	<b>8.07</b>	<b>37</b>	<b>2.53</b>	<b>7.89</b>
<b>No Feeder Blocks, Untreated Moisture content controls, Low moisture content</b>											
UML/1	32	1729	14.7	2.28	9.07	44	2.71	6.94	44	2.71	7.10
UML/2	44	1614	14.4	2.49	8.31	45	2.99	6.56	45	2.99	6.67
UML/3	122	1570	15.3	2.16	9.70	45	2.50	7.49	45	2.50	7.94
UML/4	454	1911	12.6	1.88	11.11	35	1.99	8.85	35	1.99	9.50
UML/5	475	1679	11.9	1.93	10.66	37	2.31	7.53	37	2.31	7.98
UML/6	102	1716	13.9	2.32	8.83	35	2.46	7.74	35	2.46	7.81
UML/7	142	1464	14.3	2.08	9.96	38	2.27	8.57	38	2.27	8.44
UML/8	21	2099	13.1	1.48	13.97	32	1.76	10.09	32	1.76	10.24
UML/9	134	1738	14.4	2.00	10.29	39	2.24	8.50	39	2.24	8.47
UML/10	14	1688	12.5	2.03	10.15	36	2.42	7.47	36	2.42	7.80
<b>Average</b>			<b>13.7</b>	<b>2.07</b>	<b>10.20</b>	<b>39</b>	<b>2.37</b>	<b>7.97</b>	<b>39</b>	<b>2.37</b>	<b>8.19</b>

**APPENDIX II (a) HMC Sample Treatment Details**

Sample Number	Preservative Treatment			After Treatment			Position In Exposure Tanks		
	Applied g/m <sup>2</sup>	Uptake l/m <sup>3</sup>	Retention g/100g Cu	MC %	Deflect mm	MOE GPa	Tank	Layer	Row
<b>8-week predecay, Copper naphthenate treatment 1 edge, High moisture content</b>									
C61H/1	217.0	2.85	0.008	38	2.25	8.46	3	4	3
C61H/2	189.3	2.50	0.007	38	2.26	8.08	2	3	3
C61H/3	145.0	1.91	0.006	38	2.40	7.99	3	4	1
C61H/4	179.8	2.34	0.007	42	2.41	7.98	2	5	9
C61H/5	149.2	1.92	0.005	42	2.61	7.16	2	1	3
C61H/6	132.0	1.73	0.004	40	3.90	4.98	3	2	10
C61H/7	141.8	1.87	0.006	36	2.44	7.74	3	6	4
C61H/8	152.1	1.98	0.005	39	2.65	7.21	1	2	4
C61H/9	153.1	2.00	0.007	42	3.22	5.81	3	1	9
C61H/10	186.8	2.41	0.006	37	1.83	10.10	2	4	6
C61H/11	184.2	2.40	0.007	41	2.80	6.61	3	6	1
C61H/12	200.9	2.64	0.007	40	2.23	7.94	1	4	4
C61H/13	163.5	2.16	0.006	36	2.51	7.74	1	1	6
C61H/14	151.7	1.98	0.005	42	2.04	8.91	1	6	5
C61H/15	163.6	2.14	0.006	33	1.86	9.91	1	5	9
C61H/16	216.6	2.85	0.008	41	2.02	9.37	1	5	1
C61H/17	145.0	1.82	0.005	26	2.73	6.70	2	2	1
C61H/18	118.8	1.55	0.004	33	1.98	9.32	1	3	8
C61H/19	151.1	1.98	0.007	37	2.89	6.52	3	3	10
C61H/20	164.2	2.16	0.006	36	2.72	7.19	2	6	1
<b>Average</b>	<b>165.3</b>	<b>2.16</b>	<b>0.006</b>	<b>37.9</b>	<b>2.49</b>	<b>7.78</b>			
<b>8-week predecay, Copper naphthenate treatment 2 edges, High moisture content</b>									
C62H/1	147.9	3.86	0.010	34	2.19	8.40	3	5	5
C62H/2	160.5	4.19	0.012	39	2.44	7.75	1	5	4
C62H/3	146.5	3.83	0.010	39	1.83	10.50	3	6	10
C62H/4	163.5	4.28	0.014	34	3.19	6.02	3	1	8
C62H/5	143.7	3.72	0.009	40	1.95	9.44	2	2	2
C62H/6	164.3	4.27	0.013	35	2.73	6.94	2	1	5
C62H/7	155.2	4.04	0.011	34	2.40	7.90	2	6	9
C62H/8	188.4	5.03	0.014	37	3.12	6.16	1	3	3
C62H/9	134.2	3.52	0.009	34	1.66	11.09	1	1	5
C62H/10	165.8	4.32	0.013	43	2.58	7.26	2	3	4
C62H/11	147.3	3.85	0.012	40	2.29	8.33	3	3	3
C62H/12	130.9	3.44	0.011	38	3.26	6.11	1	4	10
C62H/13	192.5	5.02	0.014	41	3.38	5.51	2	4	5
C62H/14	140.5	3.66	0.011	35	1.93	9.84	1	4	5
C62H/15	155.8	4.06	0.012	43	2.20	8.36	3	5	4
C62H/16	158.2	4.15	0.013	38	2.68	7.24	2	4	3
C62H/17	132.8	3.48	0.010	37	1.96	9.55	3	1	2
C62H/18	196.5	5.17	0.016	38	2.91	6.43	1	2	10
C62H/19	208.9	5.54	0.014	33	1.89	9.97	3	4	7
C62H/20	139.0	3.59	0.010	41	2.03	9.21	2	1	4
<b>Average</b>	<b>158.6</b>	<b>4.15</b>	<b>0.012</b>	<b>37.6</b>	<b>2.43</b>	<b>8.10</b>			

**APPENDIX II (a) contd. HMC Sample Treatment Details**

Sample Number	Preservative Treatment			After Treatment			Position In Exposure Tanks		
	Applied g/m <sup>2</sup>	Uptake l/m <sup>3</sup>	Retention g/100g Cu	MC %	Deflect mm	MOE GPa	Tank	Layer	Row
<b>8-week predecay, Copper naphthenate treatment 1 face+2 edges, High moisture content</b>									
C63H/1	140.1	7.40	0.021	34	1.79	10.46	3	4	2
C63H/2	199.9	10.60	0.030	40	2.40	8.08	1	6	3
C63H/3	190.8	9.94	0.029	39	2.14	8.22	3	5	2
C63H/4	172.8	9.05	0.026	40	2.10	8.80	1	2	2
C63H/5	224.8	11.87	0.036	44	3.10	5.91	2	6	2
C63H/6	160.2	8.40	0.023	36	1.93	9.51	2	5	5
C63H/7	203.2	10.71	0.030	38	2.48	7.62	1	3	11
C63H/8	248.8	13.13	0.036	39	2.73	6.79	2	4	8
C63H/9	169.7	8.86	0.024	40	1.76	10.10	3	3	11
C63H/10	170.1	8.94	0.024	33	1.96	9.42	3	6	8
C63H/11	161.7	8.49	0.022	35	1.80	10.24	2	4	10
C63H/12	190.8	10.11	0.032	38	2.85	6.80	2	3	9
C63H/13	226.8	12.02	0.033	37	2.84	6.64	3	1	7
C63H/14	157.4	8.30	0.020	31	1.64	11.39	1	4	9
C63H/15	183.9	9.71	0.029	38	2.38	7.97	1	1	2
C63H/16	177.8	9.31	0.026	32	2.04	8.79	2	2	7
C63H/17	154.8	8.18	0.022	36	1.89	9.96	1	4	2
C63H/18	187.4	9.87	0.027	37	2.04	9.18	2	1	10
C63H/19	203.3	10.75	0.029	37	1.96	9.71	3	2	3
C63H/20	334.7	17.67	0.053	42	3.25	5.69	1	6	9
<b>Average</b>	<b>192.9</b>	<b>10.16</b>	<b>0.029</b>	<b>37.3</b>	<b>2.25</b>	<b>8.56</b>			
<b>8-week predecay, Copper naphthenate treatment 4 sides, High moisture content</b>									
C64H/1	275.3	18.44	0.049	38	1.98	9.06	2	5	6
C64H/2	275.6	18.60	0.054	40	2.13	8.80	2	3	8
C64H/3	255.6	17.35	0.048	36	2.43	7.54	2	3	10
C64H/4	237.4	16.16	0.042	33	2.13	8.42	2	5	1
C64H/5	212.5	14.38	0.047	38	2.58	7.37	3	6	6
C64H/6	328.6	21.95	0.054	32	3.72	5.32	1	1	1
C64H/7	223.0	15.35	0.043	32	2.38	8.09	1	6	10
C64H/8	177.8	12.22	0.037	32	1.95	9.68	1	4	6
C64H/9	208.5	14.12	0.039	35	1.76	10.51	2	1	9
C64H/10	191.2	13.00	0.033	32	1.56	11.95	1	2	7
C64H/11	412.0	26.90	0.079	40	3.24	6.06	3	5	11
C64H/12	190.7	13.02	0.036	25	2.20	8.74	3	2	1
C64H/13	229.2	15.38	0.042	32	1.92	9.59	2	6	3
C64H/14	236.7	16.35	0.045	34	2.58	7.59	2	2	3
C64H/15	277.9	19.02	0.053	35	2.82	6.49	3	3	6
C64H/16	175.1	11.79	0.029	29	1.73	10.36	3	4	4
C64H/17	190.5	12.99	0.031	28	1.64	10.76	3	1	6
C64H/18	195.1	13.29	0.045	39	2.57	7.32	1	5	11
C64H/19	236.0	16.19	0.046	37	2.25	8.46	1	3	7
C64H/20	225.4	15.41	0.049	39	2.55	7.36	2	1	8
<b>Average</b>	<b>237.7</b>	<b>16.10</b>	<b>0.045</b>	<b>34.4</b>	<b>2.31</b>	<b>8.47</b>			

**APPENDIX II (a) contd. HMC Sample Treatment Details**

Sample Number	Preservative Treatment			After Treatment			Position In Exposure Tanks		
	Applied g/m <sup>2</sup>	Uptake l/m <sup>3</sup>	Retention g/100g BAE	MC %	Deflect mm	MOE GPa	Tank	Layer	Row
<b>8-week predecay, Boron treatment 1 edge, High moisture content</b>									
B61H/1	195.2	1.76	0.097	24	2.48	8.13	4	1	5
B61H/2	194.4	1.73	0.111	33	1.92	9.87	6	1	9
B61H/3	200.3	1.79	0.101	33	1.67	11.27	6	5	6
B61H/4	196.6	1.76	0.115	32	2.26	8.74	6	3	4
B61H/5	176.4	1.60	0.092	27	2.08	9.64	5	2	4
B61H/6	217.0	1.96	0.119	29	1.89	10.17	4	6	7
B61H/7	212.0	1.89	0.122	36	1.99	9.19	4	3	6
B61H/8	206.2	1.83	0.109	37	2.45	7.75	5	4	5
B61H/9	186.2	1.66	0.113	34	2.29	8.41	4	5	7
B61H/10	194.4	1.73	0.123	32	2.75	6.89	4	4	10
B61H/11	231.1	2.08	0.138	36	3.65	5.29	4	2	7
B61H/12	50.1	0.45	0.028	30	2.42	8.06	6	6	7
B61H/13	173.0	1.54	0.104	36	2.50	7.75	5	2	1
B61H/14	215.6	1.93	0.120	33	1.79	10.43	5	5	4
B61H/15	200.7	1.80	0.108	30	2.76	7.36	5	6	8
B61H/16	181.1	1.64	0.107	32	2.70	6.92	6	2	5
B61H/17	169.6	1.52	0.106	36	2.35	8.12	5	3	6
B61H/18	202.6	1.81	0.140	35	2.98	6.30	5	1	9
B61H/19	207.6	1.85	0.128	32	2.40	8.14	6	3	7
B61H/20	171.1	1.53	0.108	34	2.63	7.45	6	4	7
<b>Average</b>	<b>189.1</b>	<b>1.69</b>	<b>0.110</b>	<b>32.6</b>	<b>2.40</b>	<b>8.29</b>			
<b>8-week predecay, Boron treatment 2 edges, High moisture content</b>									
B62H/1	171.1	3.08	0.175	30	1.61	11.51	6	1	11
B62H/2	211.4	3.84	0.228	28	2.91	6.64	4	6	11
B62H/3	171.1	3.05	0.217	36	2.17	8.98	6	3	9
B62H/4	163.4	2.94	0.211	34	4.05	4.99	6	5	2
B62H/5	183.2	3.30	0.244	36	3.02	6.47	4	3	2
B62H/6	168.8	3.00	0.204	41	2.13	8.94	4	4	2
B62H/7	154.4	2.75	0.187	33	1.99	9.64	5	2	8
B62H/8	174.5	3.11	0.207	38	2.07	9.22	5	3	10
B62H/9	205.5	3.65	0.241	40	3.70	5.18	5	1	11
B62H/10	206.6	3.71	0.281	42	3.80	5.10	4	3	11
B62H/11	195.3	3.54	0.224	29	1.77	11.04	5	3	1
B62H/12	194.0	3.53	0.246	31	3.46	5.86	5	6	3
B62H/13	187.3	3.34	0.201	36	1.92	10.01	5	4	10
B62H/14	170.3	3.06	0.209	38	2.11	8.82	6	6	5
B62H/15	174.1	3.12	0.217	40	2.60	7.34	4	1	2
B62H/16	148.7	2.66	0.175	31	1.82	10.59	6	4	9
B62H/17	177.9	3.14	0.209	38	2.01	9.61	4	5	9
B62H/18	200.3	3.62	0.225	31	1.93	9.83	4	2	10
B62H/19	186.2	3.37	0.237	32	3.30	5.91	5	5	5
B62H/20	232.9	4.10	0.273	37	2.28	8.22	6	2	6
<b>Average</b>	<b>183.9</b>	<b>3.29</b>	<b>0.221</b>	<b>35.0</b>	<b>2.53</b>	<b>8.20</b>			

**APPENDIX II (a) contd. HMC Sample Treatment Details**

Sample Number	Preservative Treatment			After Treatment			Position In Exposure Tanks		
	Applied g/m <sup>2</sup>	Uptake l/m <sup>3</sup>	Retention g/100g BAE	MC %	Deflect mm	MOE GPa	Tank	Layer	Row
<b>8-week predecay, Boron treatment 1 face+2 edges, High moisture content</b>									
B63H/1	195.9	7.07	0.406	29	1.74	11.00	5	6	4
B63H/2	213.0	7.77	0.494	28	2.91	6.88	4	1	10
B63H/3	168.5	6.09	0.375	27	1.68	11.31	4	4	1
B63H/4	189.0	6.85	0.449	32	2.10	9.36	5	3	3
B63H/5	169.6	6.18	0.438	33	2.54	7.97	6	4	3
B63H/6	176.7	6.39	0.382	29	1.56	12.28	6	2	4
B63H/7	171.2	6.20	0.378	29	2.09	9.30	6	1	3
B63H/8	168.0	6.07	0.374	30	1.81	10.50	6	6	8
B63H/9	208.1	7.52	0.487	31	2.97	6.41	5	5	9
B63H/10	164.4	5.98	0.435	32	2.29	8.70	4	2	4
B63H/11	196.9	7.12	0.431	34	1.80	10.77	5	4	3
B63H/12	184.5	6.67	0.453	32	1.85	10.39	5	2	5
B63H/13	177.6	6.41	0.388	29	1.89	10.15	6	2	2
B63H/14	181.0	6.54	0.396	27	1.91	9.92	6	3	8
B63H/15	185.7	6.78	0.509	31	2.76	7.35	4	3	7
B63H/16	203.9	7.36	0.495	32	2.52	7.47	4	5	2
B63H/17	193.7	7.01	0.449	32	1.88	10.14	4	4	6
B63H/18	196.2	7.13	0.460	30	2.57	7.79	6	5	11
B63H/19	174.9	6.30	0.406	30	1.80	10.47	4	6	1
B63H/20	212.6	7.64	0.532	34	2.91	6.33	5	1	4
<b>Average</b>	<b>186.6</b>	<b>6.75</b>	<b>0.437</b>	<b>30.5</b>	<b>2.18</b>	<b>9.22</b>			
<b>8-week predecay, Boron treatment 4 sides, High moisture content</b>									
B64H/1	208.7	9.81	0.658	27	2.51	7.90	5	3	8
B64H/2	171.6	8.00	0.496	24	1.92	10.04	5	4	2
B64H/3	243.8	11.47	0.788	22	2.54	7.62	4	5	6
B64H/4	208.1	9.47	0.665	36	1.92	10.23	4	6	6
B64H/5	258.4	12.07	0.770	38	2.19	8.46	5	2	3
B64H/6	223.0	10.44	0.739	27	2.24	8.78	4	1	9
B64H/7	206.3	9.35	0.601	27	1.99	9.54	4	6	9
B64H/8	249.2	11.75	0.838	37	2.74	7.19	4	2	2
B64H/9	221.3	10.02	0.666	30	2.23	8.79	6	6	3
B64H/10	187.1	8.65	0.574	25	2.38	8.27	4	3	10
B64H/11	200.0	9.38	0.573	23	1.75	11.16	4	2	6
B64H/12	219.3	10.27	0.722	39	2.53	7.46	6	5	8
B64H/13	199.5	9.10	0.699	27	2.36	8.32	6	1	8
B64H/14	221.7	10.22	0.649	25	2.50	7.95	6	2	10
B64H/15	202.4	9.56	0.577	24	1.88	10.74	5	5	7
B64H/16	222.4	10.55	0.657	26	2.35	8.41	6	4	4
B64H/17	212.2	9.95	0.751	29	2.78	7.14	6	3	6
B64H/18	195.9	9.00	0.589	22	2.16	9.14	5	5	2
B64H/19	202.1	9.32	0.601	27	1.91	9.89	6	5	1
B64H/20	239.9	11.20	0.700	25	2.51	8.10	5	1	10
<b>Average</b>	<b>214.6</b>	<b>9.98</b>	<b>0.666</b>	<b>28.0</b>	<b>2.27</b>	<b>8.76</b>			

**APPENDIX II (a) contd. HMC Sample Treatment Details**

Sample Number	Preservative Treatment			After Treatment			Position In Exposure Tanks		
	Applied g/m <sup>2</sup>	Uptake l/m <sup>3</sup>	Retention g/100g Cu	MC %	Deflect mm	MOE GPa	Tank	Layer	Row
<b>4-week predecay, Copper naphthenate treatment 1 edge, High moisture content</b>									
C31H/1	111.0	1.46	0.004	35	2.51	7.65	2	2	4
C31H/2	145.0	1.91	0.005	34	2.14	8.97	3	5	8
C31H/3	119.0	1.56	0.005	37	3.66	5.08	1	3	1
C31H/4	118.3	1.54	0.005	45	2.53	7.58	3	6	7
C31H/5	157.0	2.06	0.005	38	3.84	5.04	2	3	5
C31H/6	130.6	1.69	0.004	37	2.34	7.89	2	6	8
C31H/7	143.1	1.87	0.005	33	2.09	9.20	1	6	7
C31H/8	117.8	1.56	0.004	24	2.04	9.46	1	2	1
C31H/9	141.5	1.87	0.005	40	2.32	8.09	1	4	8
C31H/10	144.4	1.89	0.004	30	1.63	11.59	1	5	7
C31H/11	94.1	1.23	0.004	35	2.18	8.43	3	6	11
C31H/12	94.5	1.24	0.003	37	2.33	8.06	2	5	10
C31H/13	158.1	2.08	0.006	40	1.98	9.19	1	6	4
C31H/14	156.3	2.05	0.006	34	2.03	9.43	3	2	7
C31H/15	168.8	2.22	0.007	41	3.55	5.30	2	1	2
C31H/16	151.5	1.97	0.005	36	2.72	6.93	2	4	4
C31H/17	65.9	0.86	0.002	37	2.29	8.37	3	4	5
C31H/18	146.3	1.92	0.005	31	2.00	9.40	3	1	10
C31H/19	144.1	1.89	0.005	36	3.00	6.27	3	3	8
C31H/20	147.6	1.93	0.006	35	2.70	7.12	1	1	7
<b>Average</b>	<b>132.7</b>	<b>1.74</b>	<b>0.005</b>	<b>35.9</b>	<b>2.49</b>	<b>7.95</b>			
<b>4-week predecay, Copper naphthenate treatment 2 edges, High moisture content</b>									
C32H/1	165.9	4.35	0.014	42	3.72	4.79	1	6	6
C32H/2	104.7	2.73	0.008	40	2.27	8.21	2	3	7
C32H/3	116.6	3.02	0.009	43	2.27	7.84	1	5	10
C32H/4	132.5	3.43	0.009	37	2.07	8.88	3	5	10
C32H/5	148.1	3.83	0.011	41	2.27	8.26	3	1	11
C32H/6	103.3	2.72	0.008	35	2.38	7.85	1	3	10
C32H/7	107.6	2.84	0.008	37	2.60	7.16	3	5	1
C32H/8	134.2	3.48	0.009	40	2.68	6.79	1	1	8
C32H/9	170.7	4.50	0.012	43	2.51	7.31	3	6	9
C32H/10	122.1	3.22	0.008	29	1.89	10.11	1	5	3
C32H/11	138.1	3.63	0.010	41	2.01	9.29	3	2	8
C32H/12	124.3	3.26	0.009	37	2.08	9.12	3	3	9
C32H/13	98.5	2.59	0.006	28	2.06	9.30	3	4	8
C32H/14	113.7	2.98	0.008	35	2.18	8.60	2	4	7
C32H/15	119.1	3.13	0.009	31	1.97	9.22	1	2	9
C32H/16	107.8	2.83	0.007	30	2.25	8.28	2	6	7
C32H/17	111.3	2.92	0.010	41	2.81	6.46	2	5	11
C32H/18	94.6	2.46	0.007	35	2.13	8.46	1	4	3
C32H/19	115.3	3.03	0.007	32	1.85	10.27	2	1	1
C32H/20	91.6	2.41	0.006	39	1.73	11.01	2	2	8
<b>Average</b>	<b>121.0</b>	<b>3.17</b>	<b>0.009</b>	<b>36.8</b>	<b>2.29</b>	<b>8.36</b>			

**APPENDIX II (a) contd. HMC Sample Treatment Details**

Sample Number	Preservative Treatment			After Treatment			Position In Exposure Tanks		
	Applied g/m <sup>2</sup>	Uptake l/m <sup>3</sup>	Retention g/100g Cu	MC %	Deflect mm	MOE GPa	Tank	Layer	Row
<b>4-week predecay, Copper naphthenate treatment 1 face+2 edges, High moisture content</b>									
C33H/1	187.4	9.79	0.027	33	2.58	6.98	3	5	3
C33H/2	194.7	10.26	0.030	35	3.70	5.10	2	2	6
C33H/3	178.6	9.42	0.026	36	2.66	7.05	3	1	3
C33H/4	172.2	9.04	0.023	35	1.80	10.10	1	5	8
C33H/5	190.3	9.89	0.024	37	1.79	9.87	1	6	1
C33H/6	170.4	9.03	0.024	34	2.49	7.74	1	2	3
C33H/7	217.8	11.42	0.030	37	2.22	8.25	2	6	5
C33H/8	164.5	8.73	0.026	37	2.21	8.78	3	4	9
C33H/9	178.6	9.47	0.024	32	2.74	6.93	3	3	1
C33H/10	137.8	7.24	0.017	29	1.53	11.96	2	3	2
C33H/11	230.4	12.02	0.037	39	2.56	7.05	3	6	2
C33H/12	146.6	7.79	0.023	35	2.48	7.88	3	2	5
C33H/13	179.7	9.45	0.030	40	3.70	5.13	2	5	3
C33H/14	240.5	12.61	0.038	43	2.78	6.64	2	5	7
C33H/15	159.1	8.40	0.024	33	2.30	8.13	1	6	8
C33H/16	161.9	8.60	0.027	35	3.40	5.72	1	3	6
C33H/17	137.5	7.23	0.022	38	2.29	8.19	2	1	6
C33H/18	226.6	11.86	0.033	41	3.20	5.72	1	1	4
C33H/19	191.1	10.03	0.033	43	3.37	5.54	2	5	2
C33H/20	198.7	10.47	0.029	34	2.07	8.94	1	4	7
<b>Average</b>	<b>183.2</b>	<b>9.64</b>	<b>0.027</b>	<b>36.3</b>	<b>2.59</b>	<b>7.58</b>			
<b>4-week predecay, Copper naphthenate treatment 4 sides, High moisture content</b>									
C34H/1	153.4	10.45	0.029	33	1.86	10.01	2	4	2
C34H/2	251.1	17.16	0.054	43	3.40	5.39	2	1	7
C34H/3	229.0	15.72	0.048	36	3.15	6.01	3	6	5
C34H/4	192.2	12.85	0.036	38	2.33	8.02	2	3	1
C34H/5	180.0	12.12	0.033	36	2.08	8.82	2	2	5
C34H/6	221.6	15.31	0.037	30	2.47	7.57	3	4	10
C34H/7	206.1	14.34	0.042	37	2.27	8.46	1	6	2
C34H/8	208.8	14.38	0.041	34	2.76	6.86	3	2	4
C34H/9	227.2	14.88	0.042	48	2.08	8.82	1	5	5
C34H/10	223.9	15.62	0.047	41	3.08	6.23	3	5	9
C34H/11	176.1	11.95	0.032	33	2.08	9.22	1	2	8
C34H/12	194.0	13.57	0.041	31	3.10	6.47	2	3	11
C34H/13	184.2	12.45	0.032	33	1.88	9.84	2	4	9
C34H/14	218.8	14.79	0.048	41	2.53	7.57	1	1	3
C34H/15	253.1	17.23	0.047	41	2.67	6.90	3	3	4
C34H/16	165.3	11.34	0.031	39	1.80	10.29	1	3	4
C34H/17	167.2	11.50	0.030	35	1.90	9.85	3	1	5
C34H/18	189.3	12.77	0.036	38	1.73	10.68	1	5	6
C34H/19	198.7	13.41	0.035	25	1.75	10.58	1	4	1
C34H/20	205.9	14.21	0.044	39	2.80	6.96	2	6	4
<b>Average</b>	<b>202.3</b>	<b>13.80</b>	<b>0.039</b>	<b>36.5</b>	<b>2.39</b>	<b>8.23</b>			



**APPENDIX II (a) contd. HMC Sample Treatment Details**

Sample Number	Preservative Treatment			After Treatment			Position In Exposure Tanks		
	Applied g/m <sup>2</sup>	Uptake l/m <sup>3</sup>	Retention g/100g BAE	MC %	Deflect mm	MOE GPa	Tank	Layer	Row
	<b>4-week predecay, Boron treatment 1 edge, High moisture content</b>								
B31H/1	159.3	1.42	0.091	31	2.24	8.64	4	5	10
B31H/2	203.5	1.82	0.114	44	5.05	3.65	5	2	2
B31H/3	178.9	1.60	0.090	35	1.96	9.42	6	5	7
B31H/4	174.5	1.57	0.101	30	2.93	6.87	5	5	3
B31H/5	185.6	1.65	0.115	36	2.54	7.78	5	6	9
B31H/6	203.4	1.82	0.128	31	2.26	8.69	5	3	11
B31H/7	147.3	1.32	0.095	33	3.36	6.00	6	6	9
B31H/8	176.4	1.57	0.113	38	3.70	5.34	4	1	6
B31H/9	186.6	1.70	0.119	30	2.79	7.07	6	1	1
B31H/10	189.5	1.67	0.101	37	1.81	10.31	5	1	8
B31H/11	194.4	1.73	0.118	37	2.12	8.96	4	6	5
B31H/12	145.0	1.32	0.088	35	2.59	7.17	4	6	10
B31H/13	186.4	1.69	0.110	31	2.29	8.25	4	4	4
B31H/14	160.2	1.45	0.098	36	2.81	6.82	6	1	7
B31H/15	182.1	1.62	0.106	40	2.05	9.45	4	2	8
B31H/16	137.2	1.23	0.087	34	3.30	5.99	6	4	8
B31H/17	163.1	1.46	0.101	32	2.11	9.09	6	4	6
B31H/18	222.5	2.02	0.123	32	1.82	10.76	4	3	9
B31H/19	178.6	1.60	0.107	34	2.19	8.73	5	4	4
B31H/20	117.3	1.05	0.067	30	1.95	9.75	6	2	3
<b>Average</b>	<b>174.6</b>	<b>1.57</b>	<b>0.104</b>	<b>34.4</b>	<b>2.59</b>	<b>7.94</b>			
<b>4-week predecay, Boron treatment 2 edges, High moisture content</b>									
B32H/1	172.2	3.06	0.202	46	3.63	5.25	5	6	5
B32H/2	165.4	2.90	0.191	41	2.13	8.82	4	1	4
B32H/3	171.8	3.10	0.200	30	1.80	10.48	5	3	9
B32H/4	685.0	12.36	0.840	34	2.33	8.25	6	3	11
B32H/5	129.4	2.26	0.135	43	2.07	8.85	4	5	4
B32H/6	169.2	3.05	0.196	37	2.29	8.34	6	2	9
B32H/7	122.6	2.18	0.140	39	2.23	8.59	6	3	1
B32H/8	160.1	2.82	0.187	45	2.49	7.63	5	5	10
B32H/9	173.7	3.16	0.195	35	1.92	10.01	5	2	9
B32H/10	137.1	2.46	0.171	34	2.52	7.64	6	5	4
B32H/11	176.7	3.18	0.209	40	1.92	10.05	6	1	10
B32H/12	173.7	3.10	0.179	37	1.92	9.63	4	5	1
B32H/13	126.0	2.26	0.137	26	1.71	11.29	4	6	4
B32H/14	163.1	2.89	0.176	35	2.12	9.15	4	3	5
B32H/15	162.5	2.92	0.205	46	2.48	7.52	6	6	2
B32H/16	168.4	3.00	0.234	41	3.88	4.99	4	2	9
B32H/17	183.5	3.27	0.214	44	3.29	5.80	4	4	7
B32H/18	153.6	2.71	0.174	37	2.30	8.33	5	1	5
B32H/19	130.3	2.34	0.147	39	2.37	8.13	5	4	8
B32H/20	167.3	2.97	0.228	49	3.41	5.54	6	4	10
<b>Average</b>	<b>184.6</b>	<b>3.30</b>	<b>0.218</b>	<b>39.0</b>	<b>2.44</b>	<b>8.21</b>			

**APPENDIX II (a) contd. HMC Sample Treatment Details**

Sample Number	Preservative Treatment			After Treatment			Position In Exposure Tanks		
	Applied g/m <sup>2</sup>	Uptake l/m <sup>3</sup>	Retention g/100g BAE	MC %	Deflect mm	MOE GPa	Tank	Layer	Row
<b>4-week predecay, Boron treatment 1 face+2 edges, High moisture content</b>									
B33H/1	148.8	5.42	0.378	32	2.55	7.77	5	6	2
B33H/2	182.9	6.63	0.404	27	1.77	11.07	4	1	8
B33H/3	177.6	6.40	0.467	38	3.79	5.01	5	1	1
B33H/4	186.8	6.78	0.420	27	1.87	10.39	5	3	2
B33H/5	184.5	6.71	0.406	32	3.38	5.91	6	4	1
B33H/6	173.7	6.34	0.395	30	2.66	7.59	5	4	6
B33H/7	179.5	6.51	0.431	33	2.06	9.39	6	1	4
B33H/8	188.0	6.80	0.423	31	2.43	7.95	5	3	7
B33H/9	151.5	5.51	0.343	28	1.92	10.30	4	2	3
B33H/10	179.9	6.50	0.455	34	2.05	9.28	4	4	5
B33H/11	186.9	6.80	0.461	30	3.02	6.48	4	3	1
B33H/12	188.7	6.83	0.414	28	1.98	9.86	5	5	8
B33H/13	163.6	5.92	0.393	31	2.06	9.41	5	1	6
B33H/14	176.2	6.42	0.389	25	1.62	12.19	4	3	4
B33H/15	176.0	6.36	0.366	27	1.63	11.67	6	6	4
B33H/16	206.4	7.48	0.516	34	3.10	6.25	4	5	3
B33H/17	167.9	6.10	0.377	29	2.21	8.98	5	6	6
B33H/18	163.1	5.90	0.382	28	1.78	10.75	6	2	7
B33H/19	187.3	6.82	0.451	32	2.13	9.09	5	2	7
B33H/20	172.4	6.29	0.452	29	2.75	7.26	6	5	9
<b>Average</b>	<b>177.1</b>	<b>6.43</b>	<b>0.416</b>	<b>30.3</b>	<b>2.34</b>	<b>8.83</b>			
<b>4-week predecay, Boron treatment 4 sides, High moisture content</b>									
B34H/1	252.9	12.00	0.828	33	3.04	6.40	5	3	5
B34H/2	194.6	8.94	0.530	22	1.51	13.20	6	6	6
B34H/3	215.5	9.93	0.755	28	2.20	9.08	6	2	8
B34H/4	217.8	10.36	0.591	28	3.29	6.25	5	6	1
B34H/5	240.1	11.32	0.700	30	2.30	8.52	6	1	6
B34H/6	185.7	8.83	0.666	28	2.91	6.96	5	4	1
B34H/7	207.5	9.75	0.613	28	1.65	11.75	5	5	11
B34H/8	203.7	9.75	0.607	23	2.10	9.34	6	3	2
B34H/9	190.5	8.95	0.546	25	1.97	10.26	4	2	5
B34H/10	203.7	9.27	0.603	28	1.76	10.74	6	4	1
B34H/11	187.7	8.82	0.544	26	1.91	10.25	4	4	9
B34H/12	188.4	8.83	0.594	30	2.65	7.35	4	3	8
B34H/13	187.1	8.70	0.589	30	1.90	10.24	6	5	3
B34H/14	223.1	10.17	0.765	30	3.07	6.47	5	1	2
B34H/15	214.3	9.99	0.607	29	1.93	9.87	4	6	8
B34H/16	201.5	9.54	0.592	25	2.01	9.66	5	2	6
B34H/17	210.8	9.84	0.527	26	1.77	10.82	4	5	5
B34H/18	188.0	8.82	0.609	29	2.18	9.10	4	1	11
B34H/19	248.7	11.51	0.789	34	2.78	7.06	6	3	3
B34H/20	206.5	9.59	0.618	29	2.67	7.52	4	4	11
<b>Average</b>	<b>208.4</b>	<b>9.75</b>	<b>0.634</b>	<b>28.1</b>	<b>2.28</b>	<b>9.04</b>			

**APPENDIX II (a) contd. HMC Sample Treatment Details**

Sample Number	Preservative Treatment			After Treatment			Position In Exposure Tanks		
	Applied g/m <sup>2</sup>	Uptake l/m <sup>3</sup>	Retention g/100g	MC %	Deflect mm	MOE GPa	Tank	Layer	Row
	<b>4-week predecay, Boron H1.2 treatment, High moisture content</b>								
B3H/1				29	3.60	5.51	6	1	2
B3H/2				35	5.08	3.77	1	2	5
B3H/3				38	5.37	3.79	6	5	10
B3H/4				39	3.60	5.57	2	5	4
B3H/5				36	3.21	6.21	6	4	5
B3H/6				36	4.32	4.48	2	6	6
B3H/7				37	4.03	4.78	2	1	11
B3H/8				31	3.88	5.13	5	5	6
B3H/9				39	4.16	4.64	6	6	1
B3H/10				29	5.44	3.54	1	1	9
B3H/11				36	4.25	4.55	3	2	9
B3H/12				27	3.48	5.75	3	1	1
B3H/13				31	6.34	3.12	1	3	2
B3H/14				38	3.10	6.44	4	6	3
B3H/15				32	3.62	5.47	4	3	3
B3H/16				37	3.00	6.51	5	4	9
B3H/17				40	3.42	5.89	2	3	6
B3H/18				41	4.26	4.68	4	5	8
B3H/19				35	3.45	5.75	3	3	5
B3H/20				37	4.08	5.02	4	1	1
<b>Average</b>				<b>35.2</b>	<b>4.08</b>	<b>5.03</b>			
<b>4-week predecay, Untreated controls, high moisture content</b>									
U3H/1				36	2.73	7.00	6	2	1
U3H/2				35	1.72	10.72	6	3	10
U3H/3				35	2.46	7.96	3	2	2
U3H/4				33	1.73	10.68	1	3	5
U3H/5				40	2.22	8.38	4	4	3
U3H/6				38	3.42	5.59	5	5	1
U3H/7				35	2.07	9.47	2	2	9
U3H/8				35	3.96	4.96	2	5	8
U3H/9				44	2.86	6.51	5	1	3
U3H/10				31	1.99	9.53	5	6	10
U3H/11				40	4.95	3.96	3	1	4
U3H/12				36	2.37	8.13	3	6	3
U3H/13				32	2.10	9.10	4	1	3
U3H/14				34	1.88	10.06	4	2	1
U3H/15				36	2.37	7.86	3	3	1
U3H/16				27	2.15	9.04	6	5	5
U3H/17				36	1.79	10.62	3	4	6
U3H/18				36	2.99	6.43	3	5	7
U3H/19				38	2.37	7.98	5	2	10
U3H/20				44	2.86	6.36	1	1	11
				<b>36.1</b>	<b>2.55</b>	<b>8.02</b>			

**APPENDIX II (a) contd. HMC Sample Treatment Details**

Sample Number	Preservative Treatment			After Treatment			Position In Exposure Tanks		
	Applied g/m <sup>2</sup>	Uptake l/m <sup>3</sup>	Retention g/100g	MC %	Deflect mm	MOE GPa	Tank	Layer	Row
	<b>No Feeder Blocks, Untreated Moisture content controls, High moisture content</b>								
UMH/1				42	2.90	6.68	2	2	10
UMH/2				33	2.01	9.37	5	1	7
UMH/3				36	1.67	10.96	6	3	5
UMH/4				42	2.38	7.77	6	1	5
UMH/5				36	2.59	7.50	3	5	6
UMH/6				42	3.45	5.53	5	3	4
UMH/7				33	1.83	10.07	6	6	10
UMH/8				46	3.44	5.60	4	6	2
UMH/9				34	2.04	9.22	5	4	7
UMH/10				34	1.84	10.51	1	2	6
UMH/11				40	3.30	6.14	1	3	9
UMH/12				42	2.47	7.78	1	5	2
UMH/13				39	3.18	6.05	3	2	6
UMH/14				29	1.93	9.79	1	1	10
UMH/15				43	2.47	7.62	3	3	7
UMH/16				32	1.74	10.78	4	4	8
UMH/17				43	2.68	7.06	4	1	7
UMH/18				38	1.99	9.30	2	6	10
UMH/19				36	2.02	8.92	5	6	7
UMH/20				31	2.03	9.20	2	4	1
				<b>37.6</b>	<b>2.40</b>	<b>8.29</b>			

**APPENDIX II (b) LMC Sample Treatment Details**

Sample Number	Preservative Treatment			After Treatment			Position In Exposure Tanks		
	Applied g/m <sup>2</sup>	Uptake l/m <sup>3</sup>	Retention g/100g Cu	MC %	Deflect mm	MOE GPa	Tank	Layer	Row
	<b>12-week predecay, Copper naphthenate treatment 2 edges, Low moisture content</b>								
C62L/1	98.4	2.63	0.007	24	1.74	11.75	TH	3	4
C62L/2	130.9	3.50	0.011	26	2.92	6.74	TH	9	11
C62L/3	172.6	4.66	0.012	25	1.84	10.71	TH	6	6
C62L/4	149.1	3.95	0.012	29	2.36	8.66	TH	2	3
C62L/5	136.8	3.64	0.010	26	2.83	6.96	TH	5	8
C62L/6	157.1	4.21	0.013	30	3.70	5.22	TH	1	8
C62L/7	201.7	5.41	0.017	28	3.97	4.90	TH	4	11
C62L/8	188.5	5.05	0.014	30	1.96	9.99	TH	8	3
C62L/9	137.2	3.70	0.011	29	2.87	7.00	TH	10	7
C62L/10	164.5	4.41	0.015	35	3.30	6.17	TH	7	2
<b>Average</b>	<b>153.7</b>	<b>4.12</b>	<b>0.012</b>	<b>28</b>	<b>2.75</b>	<b>7.81</b>			
<b>12-week predecay, Copper naphthenate treatment 4 sides, Low moisture content</b>									
C64L/1	293.0	20.31	0.062	31	2.60	7.46	TH	1	4
C64L/2	232.5	15.99	0.042	22	1.98	10.26	TH	7	9
C64L/3	207.4	14.39	0.042	25	2.11	9.30	TH	10	1
C64L/4	150.0	10.42	0.027	18	1.40	14.62	TH	6	11
C64L/5	207.6	14.64	0.037	22	1.68	12.39	TH	5	2
C64L/6	224.3	15.84	0.046	23	2.05	9.58	TH	4	1
C64L/7	315.2	21.37	0.066	35	5.30	3.67	TH	3	10
C64L/8	277.5	18.88	0.055	25	2.98	6.85	TH	2	9
C64L/9	213.1	14.80	0.043	30	2.00	9.90	TH	8	6
C64L/10	291.8	19.83	0.058	25	3.24	6.08	TH	9	2
<b>Average</b>	<b>241.2</b>	<b>16.65</b>	<b>0.048</b>	<b>26</b>	<b>2.53</b>	<b>9.01</b>			
Sample Number	Preservative Treatment			After Treatment			Position In Exposure Tanks		
	Applied g/m <sup>2</sup>	Uptake l/m <sup>3</sup>	Retention g/100g BAE	MC %	Deflect mm	MOE GPa	Tank	Layer	Row
	<b>12-week predecay, Boron treatment 2 edges, Low moisture content</b>								
B62L/1	171.1	3.11	0.220	26	1.95	10.40	TH	7	10
B62L/2	176.4	3.20	0.191	23	1.64	11.86	TH	6	8
B62L/3	166.8	2.99	0.184	22	1.51	13.62	TH	4	7
B62L/4	186.7	3.37	0.223	24	2.12	9.44	TH	10	2
B62L/5	161.9	2.91	0.179	24	1.79	11.22	TH	9	8
B62L/6	194.2	3.54	0.250	27	2.92	7.12	TH	2	1
B62L/7	185.2	3.36	0.235	24	3.20	6.37	TH	5	9
B62L/8	230.0	4.16	0.273	24	1.75	11.77	TH	8	4
B62L/9	190.3	3.48	0.233	26	3.22	6.43	TH	3	11
B62L/10	197.0	3.55	0.240	28	4.22	4.73	TH	1	11
<b>Average</b>	<b>186.0</b>	<b>3.37</b>	<b>0.223</b>	<b>25</b>	<b>2.43</b>	<b>9.30</b>			

**APPENDIX II (b) contd. LMC Sample Treatment Details**

Sample Number	Preservative Treatment			After Treatment			Position In Exposure Tanks		
	Applied g/m <sup>2</sup>	Uptake l/m <sup>3</sup>	Retention g/100g BAE	MC %	Deflect mm	MOE GPa	Tank	Layer	Row
<b>12-week predecay, Boron treatment 4 sides, Low moisture content</b>									
B64L/1	202.0	9.32	0.608	22	1.70	11.83	TH	9	1
B64L/2	220.3	10.15	0.719	25	2.56	7.91	TH	5	6
B64L/3	224.2	10.33	0.694	25	1.93	10.16	TH	7	11
B64L/4	202.4	9.36	0.693	25	2.41	8.40	TH	4	5
B64L/5	212.8	9.93	0.676	24	2.30	8.69	TH	2	8
B64L/6	185.6	8.54	0.598	21	1.86	10.57	TH	10	5
B64L/7	215.4	10.20	0.742	24	3.63	5.46	TH	6	1
B64L/8	204.2	9.52	0.609	22	2.68	7.59	TH	1	6
B64L/9	202.0	9.28	0.633	25	1.88	10.55	TH	8	2
B64L/10	252.4	11.89	0.757	23	2.75	7.26	TH	3	9
<b>Average</b>	<b>212.1</b>	<b>9.85</b>	<b>0.673</b>	<b>24</b>	<b>2.37</b>	<b>8.84</b>			
Sample Number	Preservative Treatment			After Treatment			Position In Exposure Tanks		
	Applied g/m <sup>2</sup>	Uptake l/m <sup>3</sup>	Retention g/100g Cu	MC %	Deflect mm	MOE GPa	Tank	Layer	Row
<b>7-week predecay, Copper naphthenate treatment 2 edges, Low moisture content</b>									
C32L/1	265.0	7.08	0.023	33	2.68	6.95	TH	9	5
C32L/2	151.1	4.04	0.011	26	2.02	9.47	TH	5	1
C32L/3	150.4	4.00	0.012	24	2.07	9.70	TH	1	1
C32L/4	218.5	5.89	0.017	24	2.31	8.59	TH	10	4
C32L/5	133.1	3.55	0.010	23	1.83	10.72	TH	2	2
C32L/6	243.6	6.56	0.017	23	1.86	10.50	TH	4	9
C32L/7	136.9	3.67	0.012	26	2.92	6.99	TH	6	3
C32L/8	135.9	3.66	0.012	24	1.86	10.50	TH	3	3
C32L/9	200.3	5.40	0.015	25	2.85	6.96	TH	8	7
C32L/10	174.1	4.65	0.012	27	3.30	5.83	TH	7	1
<b>Average</b>	<b>180.9</b>	<b>4.85</b>	<b>0.014</b>	<b>26</b>	<b>2.37</b>	<b>8.62</b>			
<b>7-week predecay, Copper naphthenate treatment 4 sides, Low moisture content</b>									
C34L/1	211.9	15.30	0.043	21	1.84	11.10	TH	8	11
C34L/2	138.8	9.60	0.026	18	1.65	12.06	TH	5	10
C34L/3	318.2	21.88	0.069	30	2.55	7.67	TH	3	7
C34L/4	187.9	13.19	0.034	21	1.60	12.30	TH	1	10
C34L/5	314.6	21.89	0.062	29	2.22	8.67	TH	9	9
C34L/6	264.2	18.05	0.050	24	3.00	6.65	TH	4	6
C34L/7	184.7	12.97	0.037	20	1.83	11.15	TH	6	9
C34L/8	259.6	18.13	0.049	25	2.07	9.55	TH	2	5
C34L/9	260.6	17.92	0.053	24	3.22	6.34	TH	10	6
C34L/10	271.7	18.85	0.059	24	2.38	8.58	TH	7	4
<b>Average</b>	<b>241.2</b>	<b>16.78</b>	<b>0.048</b>	<b>24</b>	<b>2.24</b>	<b>9.41</b>			

**APPENDIX II (b) contd. LMC Sample Treatment Details**

Sample Number	Preservative Treatment			After Treatment			Position In Exposure Tanks		
	Applied g/m <sup>2</sup>	Uptake l/m <sup>3</sup>	Retention g/100g BAE	MC %	Deflect mm	MOE GPa	Tank	Layer	Row
<b>7-week predecay, Boron treatment 2 edges, Low moisture content</b>									
B32L/1	76.2	3.44	0.231	24	1.95	10.06	TH	3	5
B32L/2	62.8	2.83	0.178	20	1.78	11.00	TH	4	10
B32L/3	74.3	3.43	0.239	24	2.80	7.11	TH	6	5
B32L/4	72.4	3.27	0.221	27	1.94	9.91	TH	9	10
B32L/5	67.2	3.09	0.214	22	2.18	9.21	TH	7	6
B32L/6	55.7	2.53	0.151	20	1.64	11.87	TH	2	10
B32L/7	71.1	3.27	0.225	24	3.08	6.48	TH	8	5
B32L/8	67.5	3.13	0.227	24	2.98	6.53	TH	10	3
B32L/9	68.4	3.20	0.214	24	2.06	9.87	TH	1	2
B32L/10	64.3	2.96	0.170	22	1.83	10.91	TH	5	5
<b>Average</b>	<b>68.0</b>	<b>3.11</b>	<b>0.207</b>	<b>23</b>	<b>2.22</b>	<b>9.30</b>			
<b>7-week predecay, Boron treatment 4 sides, Low moisture content</b>									
B34L/1	224.6	10.39	0.670	20	1.70	11.89	TH	1	9
B34L/2	208.1	9.78	0.661	20	2.47	8.02	TH	9	6
B34L/3	246.8	11.49	0.851	30	2.28	8.86	TH	2	4
B34L/4	234.5	10.96	0.813	22	2.43	8.52	TH	7	8
B34L/5	223.6	10.31	0.707	23	2.14	9.32	TH	8	9
B34L/6	220.8	10.38	0.707	20	2.68	7.53	TH	6	7
B34L/7	187.4	8.73	0.753	20	2.83	7.37	TH	5	3
B34L/8	204.8	9.45	0.629	21	2.42	8.26	TH	4	4
B34L/9	211.0	9.92	0.706	22	2.32	8.76	TH	10	10
B34L/10	209.8	9.81	0.639	21	2.09	9.57	TH	3	8
<b>Average</b>	<b>217.1</b>	<b>10.12</b>	<b>0.713</b>	<b>22</b>	<b>2.34</b>	<b>8.81</b>			
<b>4-week predecay, Boron H1.2 treatment, Low moisture content</b>									
B3L/1				25	4.08	5.05	TH	7	5
B3L/2				23	3.85	5.33	TH	2	7
B3L/3				27	2.70	7.88	TH	6	4
B3L/4				28	3.85	5.31	TH	10	9
B3L/5				26	3.04	6.90	TH	8	1
B3L/6				26	3.32	6.23	TH	3	2
B3L/7				25	4.28	4.74	TH	4	2
B3L/8				25	3.82	5.41	TH	5	11
B3L/9				20	3.51	5.80	TH	9	4
B3L/10				27	6.70	2.94	TH	1	5
<b>Average</b>				<b>25</b>	<b>3.92</b>	<b>5.56</b>			

**APPENDIX II (b) contd. LMC Sample Treatment Details**

Sample Number	Preservative Treatment			After Treatment			Position In Exposure Tanks		
	Applied g/m <sup>2</sup>	Uptake l/m <sup>3</sup>	Retention g/100g	MC %	Deflect mm	MOE GPa	Tank	Layer	Row
<b>4-week predecay, Untreated controls, Low moisture content</b>									
U3L/1				28	1.98	9.59	TH	9	3
U3L/2				31	2.23	8.61	TH	4	3
U3L/3				27	1.79	10.78	TH	8	10
U3L/4				31	2.26	8.66	TH	3	6
U3L/5				30	2.41	7.84	TH	2	11
U3L/6				34	3.53	5.25	TH	6	10
U3L/7				27	4.50	4.42	TH	1	3
U3L/8				31	2.42	7.90	TH	7	7
U3L/9				26	2.43	7.77	TH	5	7
U3L/10				29	2.46	7.60	TH	10	8
<b>Average</b>				<b>30</b>	<b>2.60</b>	<b>7.84</b>			
<b>No Feeder Blocks, Untreated Moisture content controls, Low moisture content</b>									
UML/1				30	2.64	7.38	TH	1	7
UML/2				29	3.07	6.62	TH	10	11
UML/3				35	2.52	7.97	TH	2	6
UML/4				26	2.30	8.65	TH	6	2
UML/5				26	2.35	8.26	TH	8	8
UML/6				26	2.50	7.94	TH	7	3
UML/7				26	2.38	8.51	TH	3	1
UML/8				24	1.72	11.15	TH	5	4
UML/9				27	2.32	8.43	TH	4	8
UML/10				26	2.46	7.97	TH	9	7
<b>Average</b>				<b>27</b>	<b>2.43</b>	<b>8.29</b>			



## **APPENDIX III**

### **RATINGS SYTEMS USED FOR SAMPLE ASSESSMENTS**

#### **Mycelium Spread Ratings**

- 1 = No mycelium development onto the sample surface.
- 2 = Mycelium on the surface in the immediate vicinity of the feeder block.
- 3 = Active mycelium from the feeder block on the surface, spread <50 mm.
- 4 = Active mycelium development >50 mm from the feeder block.
- 5 = Extensive mycelium development over <50% of the surface area.
- 6 = Extensive mycelium development over >50% of the surface area.

#### **Mould Ratings**

- 1 = No perceivable mould.
- 2 = Light mould patches or a few widely scattered spots.
- 3 = Numerous spots or widespread light mould.
- 4 = Severe mould, up to 50% coverage.
- 5 = Severe mould, >50% coverage.

#### **Decay Ratings**

- 10 = No decay.
- T = Trace, discolouration or softening, not positively identified as decay.
- 9 = First stages of decay or damage up to 3% of cross-section.
- 8 = Lightly established decay, 3-10% of cross-section.
- 7 = Well established decay, 10-30% of cross section.
- 6 = Deep established decay, 30-50% of cross section.
- 4 = Severe decay, nearing failure, more than 50% of the cross section.
- 0 = Failed.