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18-MONTH PROGRESS REPORT – October 2010

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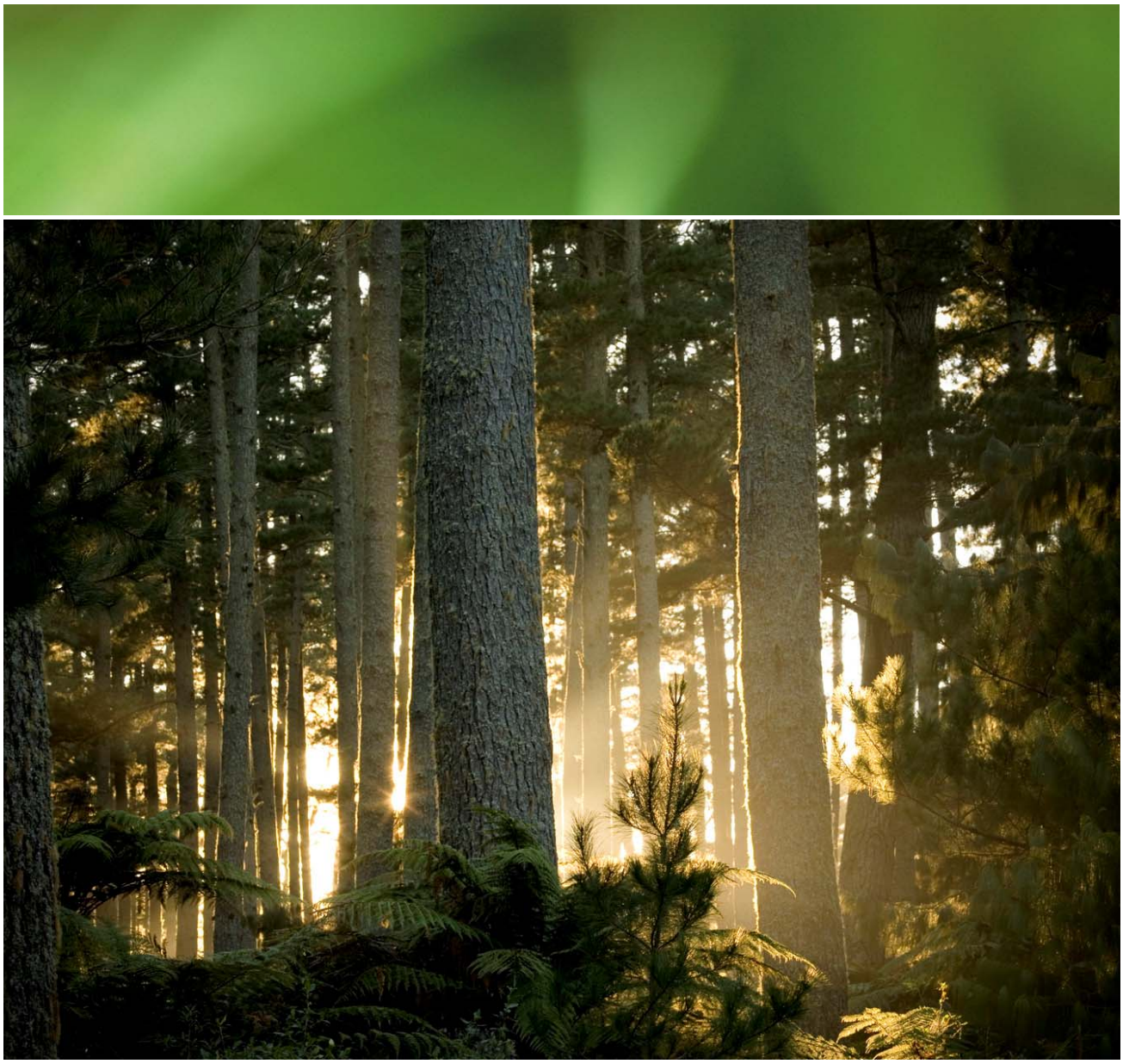

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SUMMARY

Untreated radiata pine framing timber was exposed to brown rot decay fungi and then treated with brush-on remedial preservatives. Over the 32-56 week exposure period (the last three bi-monthly deflection test assessments), patches of fresh decay mycelium had either developed or expanded in the high moisture content exposure tanks on almost all of the untreated samples, the copper naphthenate samples treated on one or two edges and the boron samples treated on one edge. While mycelium and decay ratings for these groups indicate accelerating deterioration, the deflection test results were relatively constant and changed noticeably in only a few samples in the worst affected groups. There was very little mycelium development on samples held in low moisture content conditions but decay was developing on a few of the control samples or "treated two edges" samples and on wetter samples in the bottom two layers of the stack.

Current assessments suggest that the trial is at a critical stage and that deterioration in samples treated only on one or two sides/faces will accelerate from now on.

The decision to extend the trial for a further two years, with assessments at 6-monthly intervals, is sound and is expected to clarify any differences in effectiveness of the two treatments and their application to 1-4 faces.

INTRODUCTION

Radiata pine, 90 mm x 45 mm, planer gauged, kiln dried, framing samples were wet and exposed to brown rot decay fungi for several weeks. They 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.

Details of treatments, installation and trial progress over the first 32 weeks exposure are contained in earlier progress reports. 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 also summarised in earlier reports. This report summarises the changes in the condition of the samples over the 32-56 week exposure period.

ASSESSMENT METHODS AND RESULTS

The samples were removed from the exposure tanks (HMC samples) and stack (LMC samples), weighed and measured. Visual assessments of decay mycelium development and mould infection were completed using the ratings systems shown in Appendix I. Moisture content calculations were based on changes in sample weight. The surfaces of each sample

were tested with a blunt probe to determine whether the decay fungi were damaging the framing. Deflection as a plank under a constant load was measured. Moisture content and mould ratings are summarised in Table 1, decay ratings and deflection data are summarised in Table 2.

After assessment the samples were returned to their original exposure positions. The HMC samples were sprayed with water as they were re-installed but the LMC samples were protected from wetting.

TABLE 1
MOISTURE CONTENT AND MOULD RATINGS AFTER 56 WEEKS

Treatment Group Code	Moisture content %			Mould Ratings		
	8 weeks	32 weeks	56 weeks	8 weeks	32 weeks	56 weeks
High Moisture Content Groups						
C61H	37	37	38	3.7	4.4	4.6
C62H	36	37	37	3.7	4.5	4.6
C63H	38	40	42	2.6	3.7	3.9
C64H	36	39	41	2.3	2.9	3.0
B61H	32	33	34	3.2	4.9	4.9
B62H	35	37	38	3.3	4.6	5.0
B63H	37	42	45	2.3	4.1	4.1
B64H	39	51	58	1.8	2.9	3.1
C31H	36	39	41	3.3	4.2	4.4
C32H	36	37	37	2.8	3.7	4.1
C33H	33	36	37	2.6	3.5	3.5
C34H	36	37	39	2.1	2.7	2.8
B31H	33	34	34	2.9	4.7	4.8
B32H	36	35	36	2.8	4.6	4.8
B33H	35	40	43	2.0	3.7	3.8
B34H	36	46	50	1.7	2.8	3.0
B3H	37	46	53	2.1	2.4	2.4
U3H[1]	33	33	33	2.9	4.3	4.2
UMH	34	35	36	3.0	4.2	4.4
Low Moisture Content Groups						
C62L	27	24	23	4.0	4.3	4.1
C64L	27	27	25	3.0	3.4	3.5
B62L	28	26	24	3.1	4.3	3.8
B64L	31	30	29	1.9	2.6	2.3
C32L	27	26	26	3.2	4.2	4.1
C34L	27	27	27	2.7	3.7	3.6
B32L	28	27	27	2.5	4.1	3.9
B34L	30	29	28	1.7	2.3	2.2
B3L	30	28	30	1.8	2.4	2.2
U3L[1]	28	24	25	3.8	4.4	4.1
UML	28	27	27	3.7	4.0	4.0

[1] Decay in samples from this group reduced the weight and calculated moisture content.

The average moisture content of the HMC samples has continued to increase very gradually from 39% after 32 weeks exposure to 41% after 56 weeks exposure. Most of this increase has been in samples in the upper layer in the tanks and close to the sides of the tanks which are wet by dripping condensation. The moisture content of the LMC samples has decreased slightly from 27% to 26% over the same period. The moisture content of the samples in the lower two layers of the LMC stack, calculated from the sample weights, is close to 30%. Several of the samples in these layers contain severe decay and calculations of moisture content based on their weight would have given falsely low moisture content figures. Therefore the average moisture content of samples in these layers is probably more than 30%.

TABLE 2
MYCELIUM SPREAD, INDEX OF CONDITION AND DEFLECTION

Group	Mycelium Spread Rating			Index of Condition[1]			Deflection (mm)		
Code	8 wks	32 wks	56 wks	8 wks	32 wks	56 wks	8 wks	32 wks	56 wks
High Moisture Content Groups									
C61H	1.2	2.1	3.4	8.4	8.2	7.6	2.38	2.34	2.36
C62H	1.1	2.4	3.6	8.2	8.1	7.8	2.37	2.38	2.46
C63H	1.2	2.4	3.1	8.3	8.1	8.0	2.17	2.17	2.16
C64H	1.0	1.2	1.1	8.1	8.0	8.0	2.17	2.18	2.16
B61H	1.0	2.9	3.6	8.6	8.2	7.3	2.24	2.29	2.31
B62H	1.0	1.7	1.5	8.6	8.2	8.0	2.39	2.39	2.38
B63H	1.0	1.2	1.2	8.6	8.2	8.3	2.15	2.15	2.13
B64H	1.0	1.1	1.0	8.4	8.2	8.2	2.20	2.20	2.19
C31H	1.3	2.3	3.3	9.5	8.9	7.6	2.37	2.50	2.46
C32H	1.1	2.1	3.2	9.6	8.9	7.9	2.18	2.21	2.50
C33H	1.0	1.4	2.1	9.4	9.2	8.7	2.47	2.47	2.47
C34H	1.0	1.0	1.3	9.2	8.9	8.8	2.24	2.23	2.29
B31H	1.1	3.6	4.1	9.7	8.0	6.9	2.45	2.51	2.69
B32H	1.0	1.7	1.7	9.6	9.1	9.0	2.31	2.29	2.30
B33H	1.0	1.0	1.0	9.8	9.8	9.5	2.33	2.31	2.33
B34H	1.0	1.0	1.0	9.6	9.2	9.3	2.17	2.17	2.18
B3H[2]	1.0	1.0	1.0	10.0	10.0	10.0	3.92	3.91	3.88
U3H	1.3	2.8	3.9	9.4	8.4	7.2	2.43	2.45	2.66
UMH	1.1	2.8	2.7	10.0	9.6	9.4	2.27	2.28	2.28
Low Moisture Content Groups									
C62L	1.1	2.9	3.1	8.1	7.6	6.4	2.52	2.84	3.19
C64L	1.0	1.1	1.3	8.3	8.0	7.9	2.35	2.33	2.35
B62L	1.0	1.8	2.4	8.9	8.2	7.7	2.31	2.53	2.55
B64L	1.0	1.0	1.0	8.2	8.0	8.0	2.35	2.34	2.29
C32L	1.0	1.5	2.2	8.7	8.5	8.1	2.18	2.19	2.22
C34L	1.0	1.0	1.0	8.6	8.3	8.2	2.11	2.09	2.08
B32L	1.0	1.0	1.1	9.0	8.8	8.3	2.11	2.11	2.09
B34L	1.0	1.0	1.0	8.6	8.4	8.2	2.37	2.33	2.30
B3L[2]	1.0	1.0	1.1	10.0	10.0	10.0	3.79	3.75	3.73
U3L	1.0	2.3	2.5	8.5	7.8	6.3	2.44	2.79	3.37
UML	1.0	1.0	1.7	10.0	10.0	9.6	2.27	2.27	2.25

[1] Index of Condition is the average decay rating for all of the samples in a group.
[2] This group was framing grade timber, all other groups were clears grade sapwood.

Samples treated with boron on three or four sides appear to be slightly wetter than samples treated either with copper naphthenate or on one or two edges with boron. This may be due to the slightly more hygroscopic nature of the boron glycol preservative formulation.

Moulds on most of the untreated surfaces increased in from the first 8-week assessment to the fourth. There has been little change since.

The zone on the samples decayed before treatment by decay fungi from the feeder blocks had darkened in colour and had been clearly visible through the 56 week exposure period. Between the 32-week and 56-week assessments the original decay fungi had developed noticeably on untreated surfaces. In HMC samples this has been either extensive mycelium growth across the untreated surfaces and slight-moderate decay in the surface in patches under the mycelium, or patches on the untreated surfaces originating from underlying internal decay pockets. The former pattern was more obvious on untreated and boron treated samples, whereas the latter was more often in copper naphthenate treated samples.

For the HMC, copper naphthenate treated samples, fresh mycelium on one or more untreated surfaces, was recorded in 90% of the samples treated on one edge, 85% of the samples treated on two edges, 65% of the samples treated on three sides and 15% of the samples treated on four sides. For the boron treated samples the respective percentages were 92%, 25%, 3% and zero. Ninety percent of the untreated control samples and 60% of the moisture content control samples (not infected with decay before treatment) had fresh mycelium on them. Decay fungi other than *Oligoporus placenta* appeared to be present on some of the control samples and on one or two of the treated samples.

Figure 1
Index of Condition Changes - Treatment Groups

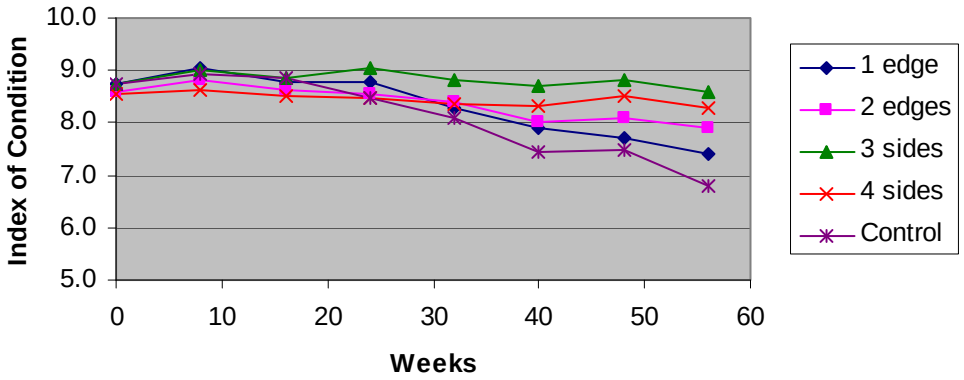
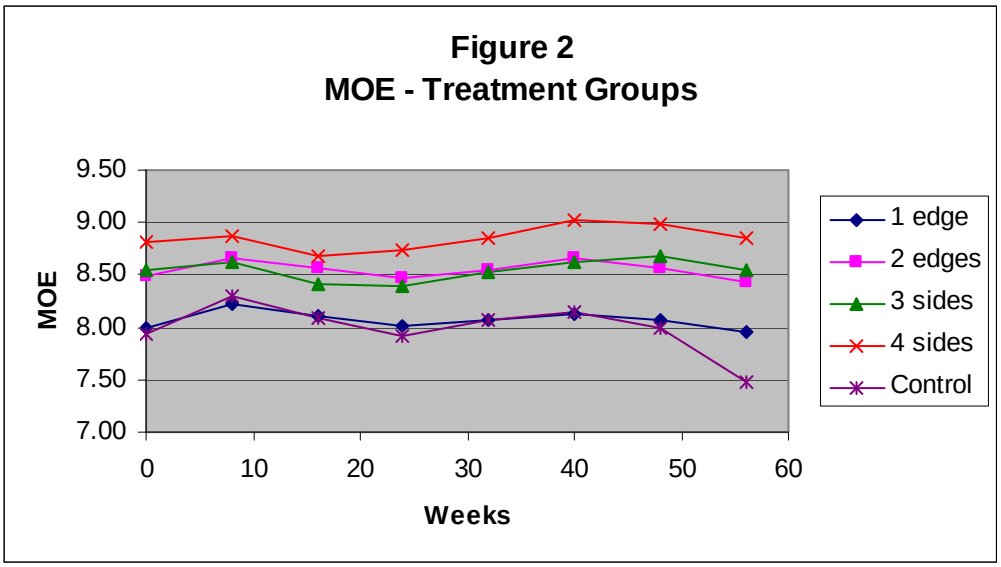


Figure 1 shows changes in the "Index of Condition", regardless of the preservative used or the exposure conditions, as the trial progressed. This shows virtually no change for samples treated on three or four surfaces but definite declines in the untreated controls and the samples treated on one or two edges.



In Figure 2 the modulus of elasticity (MOE) for the same treatment groups is shown. While there has been very little change in any of the preservative treated groups, the MOE for untreated control samples beginning to decrease rapidly.

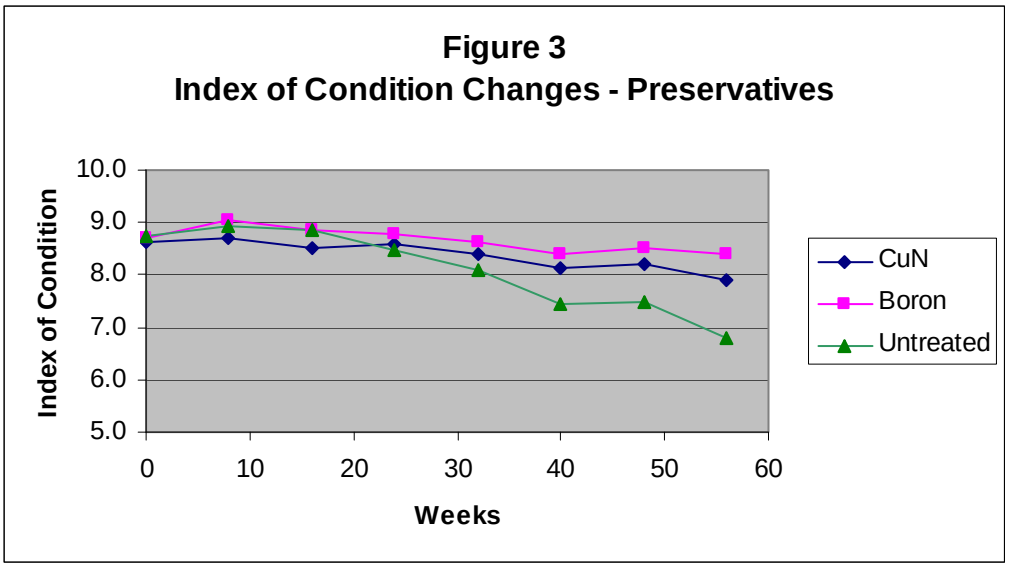
One sample in the HMC tanks, from a group treated on two edges with copper naphthenate, failed during deflection testing after 48 weeks exposure. Only a few other HMC samples with moderate- severe decay showed any consistent deflection increases.

Three LMC samples from the wetter bottom two layers of the stack failed during deflection testing. The first failure was copper naphthenate treated on two edges after 40 weeks exposure and the others were untreated controls after 56 weeks exposure. Decay in the LMC samples, originating from the *Gloeophyllum sepiarium* feeder blocks is not marked by obvious decay mycelium but by subtle yellowing in the surface. These discoloured areas are usually soft when probed. When severe decay has developed fruiting bodies have appeared on the surfaces. At this stage this has only occurred in the bottom layer of the stack. Where decay is developing higher in the stack it does not appear to have consistently caused deflection increases.

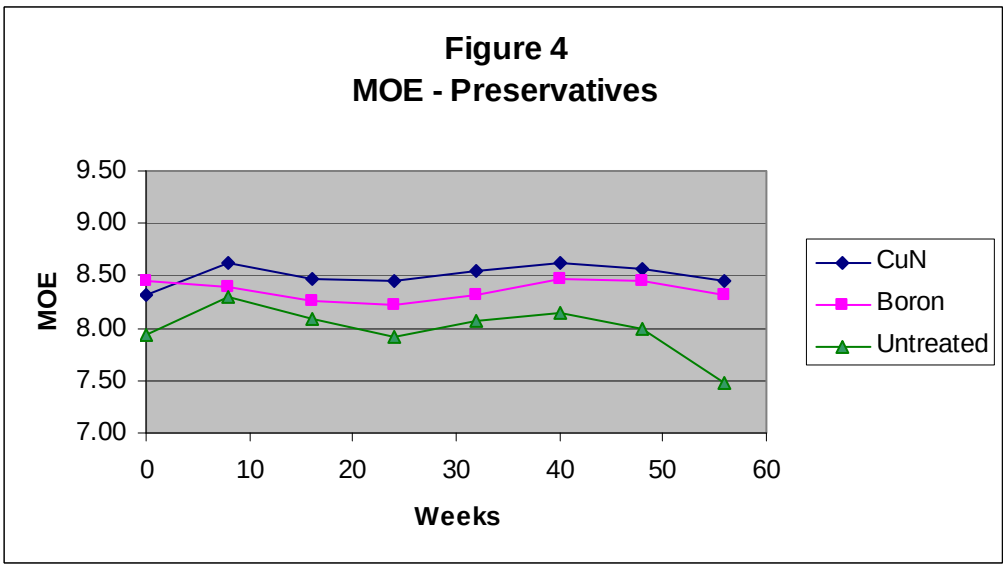
There has been no deterioration in the samples treated with boron to the H1.2 specification in either of the exposure situations.

Obvious deflection increases have been restricted to a few samples where moderate-severe decay has developed and these are scattered through the groups that have less than three surfaces treated. This has resulted in quite minor increases to deflection measurement averages throughout the exposure period.

After 56 weeks deflection measurements remained relatively stable for all of the treated groups. Mycelium and decay ratings indicate that deterioration is occurring but deflection measurements and MOE calculations suggest that this is having an effect on only a few of the worst affected samples.



In Figure 3 decay ratings for the two preservatives are shown and this suggests that samples treated with the copper naphthenate formulation have developed slightly more decay than those treated with the boron formulation.



In Figure 4, MOE for both preservative groupings is reasonably consistent and it is only the untreated samples that are showing obvious strength loss.

Results from the trial have continued to develop very slowly. Current indications are that the test is at a critical stage and much more deterioration could be expected in the next few months. Mycelium ratings have increased in some of the groups and decay ratings have begun to change more rapidly. In similar trials decay ratings of “7” or above had little effect on MOE but decay ratings of “6” and below were associated with deflection increases and failures during deflection testing.

Figure 5 – Copper naphthenate treated HMC samples in tank 2, layer 6 (top), after 56 weeks exposure. There were patches of decay mycelium on the sides of most of the samples treated on one or two edges. Decay areas that had developed on the upper edge before treatment were still visible.

Figure 6 – Copper naphthenate treated HMC samples in tank 2, layer 3 (3rd from bottom), after 56 weeks exposure. Samples were drier than in the top layer but there were still patches of fresh mycelium on the faces of samples that had been treated only on one or two edges.

Figure 7 – HMC boron treated samples in tank 5, layer 6 (top), after 56 weeks exposure. There was extensive mycelium on the untreated surfaces of one control sample and two adjacent samples that had only been treated on the lower edge. Other treated samples in that layer were free from fresh decay.

Figure 8 – HMC boron treated samples in tank 6, layer 4 (3rd from top), after 56 weeks exposure. There was extensive fresh mycelium on the untreated surfaces of three samples that had been treated on only one edge. While there was extensive mycelium growth, decay in the samples was only light-moderate.

Figure 9 – HMC sample C32H/17, copper naphthenate treated on two edges, after 56 weeks exposure. Decay mycelium spreading from the original infected area and a deep internal decay pocket near the original decay feeder block site.

Figure 10 – HMC sample C62H/7, copper naphthenate treated on two edges, after 56 weeks exposure. There was extensive mycelium developing on the untreated faces around the original infected area but the wood underneath was still relatively sound. This sample was from the top layer in Tank 2. Nineteen of the 20 samples in this treatment group had fresh mycelium on the untreated surfaces.

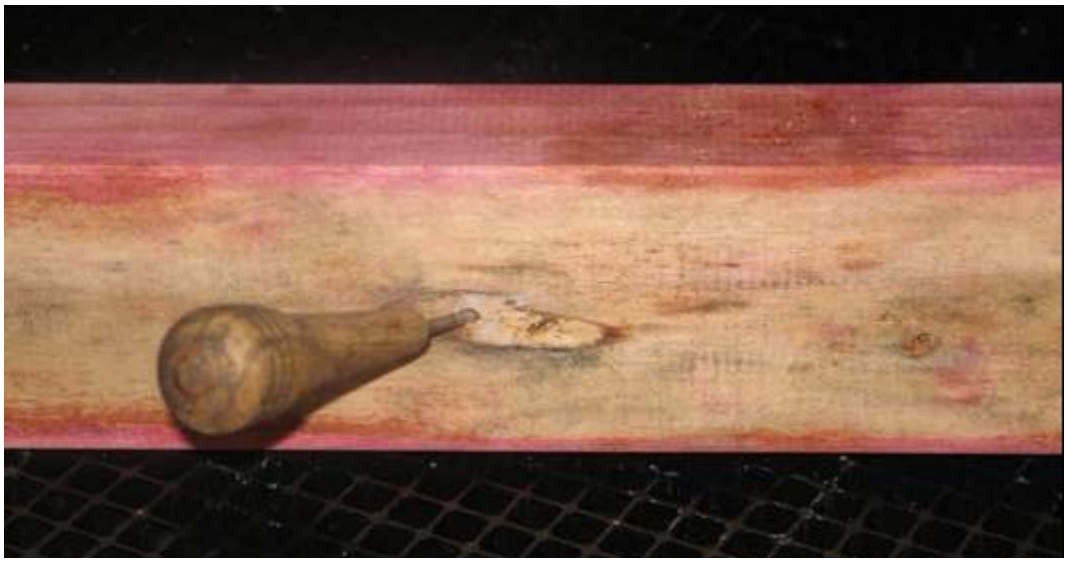


Figure 11 – HMC sample B62H/5, treated with boron on both edges, after 56 weeks exposure. A small decay patch had developed on one untreated surface close to the area of the original infection.

Figure 12 – HMC sample B31H/1, treated with boron on one edge, after 56 weeks exposure. Extensive mycelium on the untreated sides of the sample but associated decay was relatively shallow.

Figure 13 – Untreated sample (not pre-decayed) UMH/19, after 56 weeks exposure. Decay mycelium and pale discolouration associated with decay appeared to have come from outside contamination.

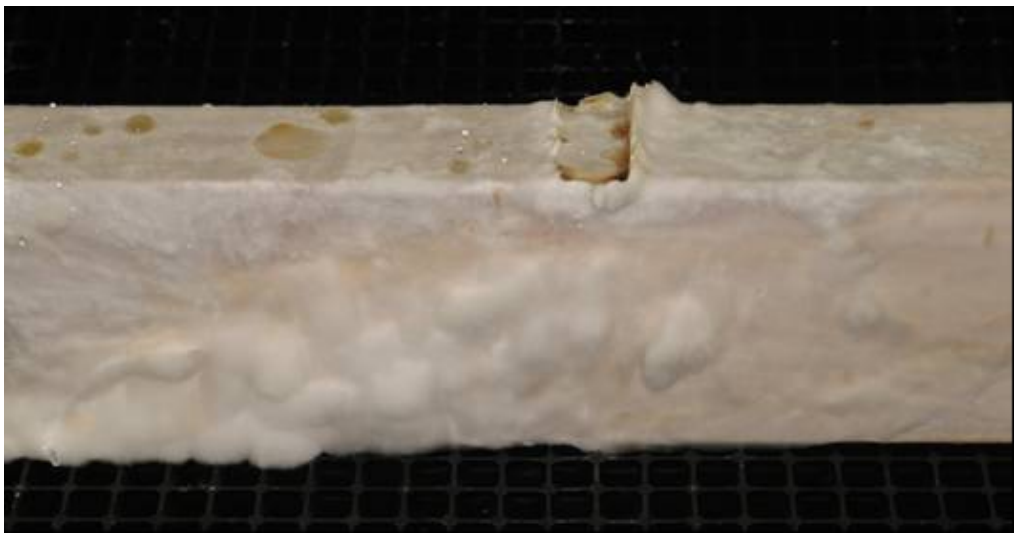


Figure 14 – Untreated sample U3H/10, after 48 weeks exposure. Decay mycelium had spread over most of the surface and decay was rated severe but the sample did not fail the deflection test at either the 48-week or the 56-week assessments.

Figure 15 – HMC sample B32H/20, boron treated on two edges, after 56 weeks exposure. Decay and fine mycelium spreading on the faces between the treated edges at one end of the sample. This appears to have been from outside contamination and not the original *Oligoporus placenta* feeder block infection.

Figure 16 – LMC control sample U3L7, after 56 weeks exposure. Extensive fruiting bodies and decay in this sample due to damp conditions in the bottom layer of the stack. This sample failed during the deflection test of the 56-week assessment.

Figure 17 – LMC sample C62L7, copper naphthenate treated on two edges after 56 weeks exposure. Decay well established in patches on the untreated surfaces adjacent to and spreading out from the original feeder block infected area. There was no obvious mycelium and only minor colour changes on the surface to indicate that the wood was deteriorating. Deflection has increased in this sample by more than 20% since the 8-week assessment.

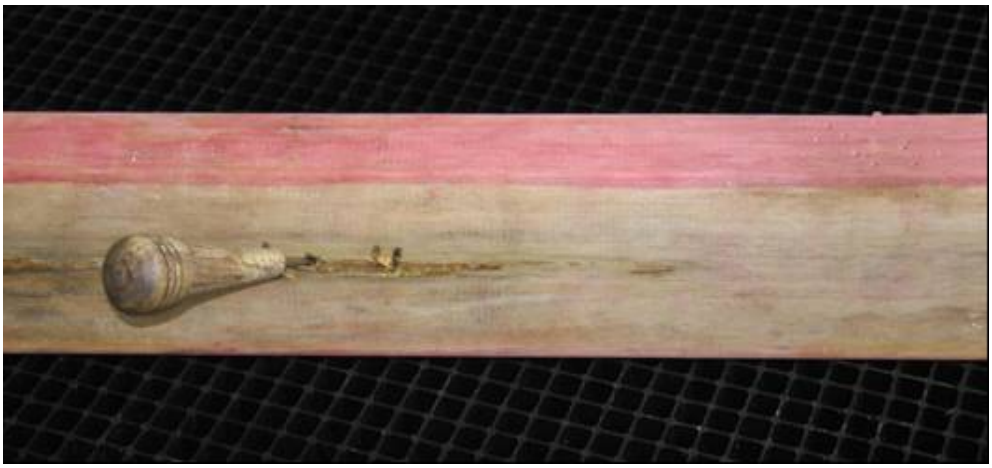


Figure 18 – LMC sample B62L/6, after 56 weeks exposure. Decay fruiting bodies and moderate decay between the treated edges but deflection had only increased by 12% since the first 8-week assessment. This sample was in the relatively damp bottom layer of the LMC stack.

APPENDIX I
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.

APPENDIX IIa

INDIVIDUAL SAMPLE DETAILS AFTER 56 WEEKS EXPOSURE

Sample No	OD Wt Calc	Weight Wet	MC %	Ratings			Deflect (mm)	MOE (GPa)
				Mycel	Decay	Mould		
HMC/ 6-week predecay, Copper naphthenate treatment 1 edge								
C61H/1	1738	2364	36	4	7	5	2.05	8.93
C61H/2	1695	2261	33	4	8	4.5	2.21	8.33
C61H/3	1648	2194	33	4	8	4.5	2.34	8.07
C61H/4	1667	2240	34	5	8	5	2.38	7.88
C61H/5	1909	2542	33	4	7	5	2.61	6.77
C61H/6	1857	2552	37	5	6	5	3.68	5.15
C61H/7	1618	2453	52	4	7	4	2.41	7.54
C61H/8	1967	2656	35	2	8	5	2.42	7.74
C61H/9	1481	2115	43	3	8	5	3.11	5.92
C61H/10	1983	2684	35	3	8	4	1.69	10.69
C61H/11	1623	2518	55	3	8	4.5	2.61	7.25
C61H/12	1801	2514	40	4	8	4.5	2.17	8.10
C61H/13	1780	2352	32	1	8	4.5	2.30	8.26
C61H/14	1820	2900	59	2	8	5	1.90	9.40
C61H/15	1774	2401	35	4	8	4.5	1.79	10.25
C61H/16	1809	2432	34	5	8	5	1.80	10.53
C61H/17	1958	2481	27	1	T	3.5	2.73	7.14
C61H/18	1919	2548	33	4	8	4.5	1.94	9.22
C61H/19	1443	1957	36	2	7	5	2.70	7.00
C61H/20	1595	2319	45	4	7	4.5	2.43	7.71
			38	**3.4**	**7.6**	**4.6**	**2.36**	**8.09**

APPENDIX IIa (contd.)

INDIVIDUAL SAMPLE DETAILS AFTER 56 WEEKS EXPOSURE

Sample No	OD Wt Calc	Weight Wet	MC %	Ratings			Deflect (mm)	MOE (GPa)
				Mycel	Decay	Mould		
HMC/ 6-week predecay, Copper naphthenate treatment 2 edges								
C62H/1	1817	2432	34	4	8	4.5	2.06	8.71
C62H/2	1637	2179	33	4	7	4.5	2.51	7.48
C62H/3	1907	2988	57	4	8	4.5	1.92	9.39
C62H/4	1466	2131	45	3	8	5	2.96	6.49
C62H/5	1958	2594	32	3	8	4	1.86	9.89
C62H/6	1566	2103	34	3	7	4.5	2.68	6.93
C62H/7	1778	2672	50	5	7	4.5	4.28	4.39
C62H/8	1733	2324	34	4	8	4.5	2.98	6.43
C62H/9	1972	2587	31	4	8	5	1.67	10.52
C62H/10	1606	2225	39	4	8	4.5	2.64	6.96
C62H/11	1593	2130	34	4	8	5	2.21	8.47
C62H/12	1490	2153	44	4	8	5	3.14	6.15
C62H/13	1745	2336	34	4	8	5	3.17	5.86
C62H/14	1680	2253	34	4	8	5	1.90	9.71
C62H/15	1678	2259	35	4	7	4.5	2.18	8.35
C62H/16	1564	2109	35	4	8	4	2.70	7.08
C62H/17	1759	2289	30	1	8	4.5	1.75	10.49
C62H/18	1605	2278	42	2	8	5	2.80	6.53
C62H/19	1932	2578	33	4	8	4.5	1.80	10.34
C62H/20	1717	2340	36	3	7	4	2.04	8.96
			37	**3.6**	**7.8**	**4.6**	**2.46**	**7.96**

APPENDIX IIa (contd.)

INDIVIDUAL SAMPLE DETAILS AFTER 56 WEEKS EXPOSURE

Sample No	OD Wt Calc	Weight Wet	MC %	Ratings			Deflect (mm)	MOE (GPa)
				Mycel	Decay	Mould		
HMC/6-week predecay, Copper naphthenate treatment 1 face, 2 edges								
C63H/1	1715	2294	34	3	8	3.5	1.72	10.78
C63H/2	1713	2753	61	4	8	4.5	2.30	8.03
C63H/3	1675	2234	33	4	8	4.5	1.99	9.47
C63H/4	1685	2245	33	2	8	4	2.01	8.89
C63H/5	1607	2497	55	4	8	5	2.89	6.63
C63H/6	1782	2402	35	2	8	4	1.93	9.02
C63H/7	1709	2445	43	4	8	4	2.45	7.58
C63H/8	1781	2480	39	3	8	3	2.53	7.21
C63H/9	1827	2574	41	5	8	4	1.78	10.21
C63H/10	1854	2823	52	1	8	4	1.87	10.05
C63H/11	1892	2710	43	3	8	3.5	1.68	10.71
C63H/12	1513	2064	36	4	8	3.5	2.83	6.95
C63H/13	1721	2434	41	4	7	3.5	2.75	6.91
C63H/14	1968	2647	35	2	8	4	1.58	11.52
C63H/15	1614	2107	31	1	8	4.5	2.26	8.58
C63H/16	1736	2355	36	1	8	2.5	1.90	9.58
C63H/17	1804	2412	34	3	8	5	1.74	10.56
C63H/18	1770	2708	53	4	8	4	2.06	9.05
C63H/19	1801	2400	33	3	9	3	1.86	9.67
C63H/20	1598	2655	66	4	8	4.5	3.04	6.46
			42	**3.1**	**8.0**	**3.9**	**2.16**	**8.89**

APPENDIX IIa (contd.)

INDIVIDUAL SAMPLE DETAILS AFTER 56 WEEKS EXPOSURE

Sample No	OD Wt Calc	Weight Wet	MC %	Ratings			Deflect (mm)	MOE (GPa)
				Mycel	Decay	Mould		
HMC/ 6-week predecay, Copper naphthenate treatment 4 sides								
C64H/1	1846	2508	36	1	8	3.5	1.98	9.50
C64H/2	1688	2379	41	1	8	3.5	1.95	9.40
C64H/3	1764	2453	39	1	7	3	2.26	8.03
C64H/4	1888	2530	34	1	8	3	1.99	9.15
C64H/5	1467	2303	57	1	7	3	2.54	7.52
C64H/6	1911	2467	29	1	9	2.5	3.38	5.90
C64H/7	1705	2944	73	1	8	2.5	2.24	8.33
C64H/8	1586	2129	34	1	8	3.5	1.85	10.12
C64H/9	1781	2510	41	1	8	3	1.70	10.75
C64H/10	1932	2569	33	1	8	3	1.41	12.76
C64H/11	1616	2534	57	1	8	3.5	3.06	6.17
C64H/12	1729	2228	29	1	8	3	2.00	9.41
C64H/13	1789	2670	49	1	8	3	1.95	9.55
C64H/14	1736	2313	33	1	8	2.5	2.51	7.52
C64H/15	1739	2316	33	1	8	2.5	2.46	7.84
C64H/16	2011	2673	33	3	8	3	1.53	12.09
C64H/17	2093	2811	34	1	8	2.5	1.49	12.39
C64H/18	1428	2228	56	1	8	2.5	2.36	8.12
C64H/19	1688	2304	36	1	8	2.5	2.09	9.00
C64H/20	1521	2241	47	1	8	3.5	2.35	8.05
			41	**1.1**	**8.0**	**3.0**	**2.16**	**9.08**

APPENDIX IIa (contd.)

INDIVIDUAL SAMPLE DETAILS AFTER 56 WEEKS EXPOSURE

Sample No	OD Wt Calc	Weight Wet	MC %	Ratings			Deflect (mm)	MOE (GPa)
				Mycel	Decay	Mould		
HMC/ 6-week predecay, Boron treatment 1 edge								
B61H/1	2012	2577	28	4	7	5	2.44	7.96
B61H/2	1780	2357	32	3	8	5	1.84	10.02
B61H/3	2030	2655	31	4	8	5	1.33	13.67
B61H/4	1719	2284	33	3	8	5	2.03	9.40
B61H/5	1923	2486	29	4	8	4.5	2.14	8.91
B61H/6	1857	2559	38	4	7	5	1.80	10.30
B61H/7	1802	2360	31	5	6	5	2.21	8.20
B61H/8	1922	2605	36	1	8	5	2.22	8.10
B61H/9	1675	2246	34	4	7	5	2.13	8.75
B61H/10	1615	2141	33	4	7	5	2.44	7.57
B61H/11	1706	2280	34	4	7	5	3.56	5.32
B61H/12	1814	2588	43	4	7	5	2.36	7.50
B61H/13	1686	2202	31	4	7	5	2.40	7.67
B61H/14	1837	2475	35	1	7	5	1.79	9.96
B61H/15	1849	2611	41	5	7	5	3.03	6.05
B61H/16	1745	2290	31	4	7	5	2.50	7.61
B61H/17	1624	2141	32	3	8	4.5	2.33	7.73
B61H/18	1481	2038	38	3	7	5	2.88	6.34
B61H/19	1641	2170	32	3	8	4.5	2.21	8.49
B61H/20	1608	2125	32	4	7	5	2.62	7.15
			34	**3.6**	**7.3**	**4.9**	**2.31**	**8.34**

APPENDIX IIa (contd.)

INDIVIDUAL SAMPLE DETAILS AFTER 56 WEEKS EXPOSURE

Sample No	OD Wt Calc	Weight Wet	MC %	Ratings			Deflect (mm)	MOE (GPa)
				Mycel	Decay	Mould		
HMC/ 6-week predecay, Boron treatment 2 edges								
B62H/1	2012	2655	32	3	8	5	1.52	11.68
B62H/2	1891	2985	58	3	8	5	2.77	6.87
B62H/3	1595	2111	32	1	8	5	2.05	9.02
B62H/4	1550	2061	33	1	9	5	3.71	5.28
B62H/5	1523	2039	34	3	7	5	3.03	6.17
B62H/6	1686	2222	32	1	8	5	2.06	8.67
B62H/7	1678	2271	35	1	8	5	1.89	9.60
B62H/8	1718	2381	39	1	8	5	1.83	10.14
B62H/9	1729	2357	36	1	8	5	3.69	5.10
B62H/10	1493	2114	42	1	7	5	3.44	5.55
B62H/11	1769	2313	31	1	8	4.5	1.48	12.44
B62H/12	1583	2381	50	1	8	5	3.20	6.04
B62H/13	1891	2738	45	1	8	4.5	1.79	10.06
B62H/14	1676	2538	51	1	9	5	1.89	9.39
B62H/15	1633	2165	33	1	8	5	2.50	7.26
B62H/16	1722	2296	33	1	8	5	1.68	10.87
B62H/17	1717	2340	36	1	8	5	1.84	9.85
B62H/18	1823	2472	36	1	8	5	2.09	8.58
B62H/19	1593	2164	36	3	8	5	3.09	6.41
B62H/20	1739	2339	35	3	7	5	2.00	9.40
			38	**1.5**	**8.0**	**5.0**	**2.38**	**8.42**

APPENDIX IIa (contd.)

INDIVIDUAL SAMPLE DETAILS AFTER 56 WEEKS EXPOSURE

Sample No	OD Wt Calc	Weight Wet	MC %	Ratings			Deflect (mm)	MOE (GPa)
				Mycel	Decay	Mould		
HMC/ 6-week predecay, Boron treatment 1 face, 2 edges								
B63H/1	1974	3141	59	4	7	4	1.65	11.37
B63H/2	1746	2512	44	1	8	4.5	2.83	6.74
B63H/3	1840	2597	41	1	8	3.5	1.58	11.30
B63H/4	1713	2459	44	1	8	4	2.02	9.07
B63H/5	1568	2138	36	1	8	4	2.79	7.14
B63H/6	1888	2655	41	1	9	4	1.71	10.46
B63H/7	1848	2478	34	1	9	3.5	1.90	9.19
B63H/8	1838	2892	57	1	8	4	1.74	10.15
B63H/9	1748	2629	50	1	8	4	2.79	6.62
B63H/10	1538	2090	36	1	8	4	2.12	8.94
B63H/11	1868	2667	43	1	9	4	1.80	10.43
B63H/12	1664	2352	41	1	8	4	2.05	8.75
B63H/13	1869	2543	36	1	9	4	1.69	10.69
B63H/14	1867	2677	43	1	9	4	1.87	9.78
B63H/15	1476	2074	41	1	8	4	2.65	7.28
B63H/16	1684	2476	47	1	8	4.5	2.28	8.02
B63H/17	1762	2433	38	1	8	5	2.19	8.32
B63H/18	1734	2856	65	1	8	4	2.51	7.82
B63H/19	1764	3013	71	1	8	4.5	1.73	10.36
B63H/20	1642	2309	41	1	9	4.5	2.64	6.75
			45	**1.2**	**8.3**	**4.1**	**2.13**	**8.96**

APPENDIX IIa (contd.)

INDIVIDUAL SAMPLE DETAILS AFTER 56 WEEKS EXPOSURE

Sample No	OD Wt Calc	Weight Wet	MC %	Ratings			Deflect (mm)	MOE (GPa)
				Mycel	Decay	Mould		
HMC/ 6-week predecay, Boron treatment 4 sides								
B64H/1	1668	2617	57	1	9	3	2.32	8.20
B64H/2	1816	2572	42	1	T	3	1.86	9.88
B64H/3	1642	2272	38	1	8	3	2.56	7.32
B64H/4	1594	2817	77	1	9	3	1.77	10.51
B64H/5	1811	3008	66	1	8	3	2.20	8.23
B64H/6	1587	2560	61	1	8	3	2.05	8.97
B64H/7	1772	3136	77	1	8	3	1.93	9.52
B64H/8	1574	2403	53	1	8	4	2.57	7.47
B64H/9	1690	3027	79	1	8	3	2.19	8.39
B64H/10	1692	2542	50	1	8	3.5	2.20	8.72
B64H/11	1835	2757	50	1	8	3	1.86	9.93
B64H/12	1621	2692	66	1	8	3	2.60	7.06
B64H/13	1464	2262	55	1	8	3	2.34	8.12
B64H/14	1758	2884	64	1	9	2.5	2.36	7.99
B64H/15	1839	2612	42	1	8	3.5	2.00	9.71
B64H/16	1795	2732	52	1	8	3	2.30	8.34
B64H/17	1483	2387	61	1	8	3	2.63	7.35
B64H/18	1711	2489	45	1	8	4	2.08	9.07
B64H/19	1761	2703	53	1	8	2	1.84	10.01
B64H/20	1779	2900	63	1	8	3	2.13	9.15
			58	**1.0**	**8.2**	**3.1**	**2.19**	**8.70**

APPENDIX IIa (contd.)

INDIVIDUAL SAMPLE DETAILS AFTER 56 WEEKS EXPOSURE

Sample No	OD Wt Calc	Weight Wet	MC %	Ratings			Deflect (mm)	MOE (GPa)
				Mycel	Decay	Mould		
HMC/ 3-week predecay, Copper naphthenate treatment 1 edge								
C31H/1	1624	2160	33	3	6	3	2.53	7.40
C31H/2	1707	2335	37	5	7	5	2.22	8.54
C31H/3	1670	2187	31	2	8	4.5	3.29	5.64
C31H/4	1621	2763	70	2	9	4.5	2.37	7.85
C31H/5	1862	2473	33	4	7	5	3.92	4.94
C31H/6	1941	3000	55	3	9	5	2.24	8.09
C31H/7	1997	2968	49	5	6	5	2.24	8.24
C31H/8	2008	2569	28	1	10	4.5	1.82	10.26
C31H/9	1761	2413	37	4	8	4.5	2.34	7.87
C31H/10	2043	2711	33	2	9	3	1.79	10.20
C31H/11	1595	2884	81	4	6	3.5	2.06	8.83
C31H/12	1811	2381	31	5	8	5	2.29	8.04
C31H/13	1769	2780	57	3	7	5	1.88	9.43
C31H/14	1724	2306	34	4	7	3.5	1.88	9.89
C31H/15	1490	1974	32	3	7	4.5	3.44	5.36
C31H/16	1768	2385	35	2	9	4	2.61	7.07
C31H/17	1691	2270	34	2	8	4.5	2.15	8.85
C31H/18	1764	2381	35	3	8	4.5	1.78	10.29
C31H/19	1710	2313	35	4	9	4	2.81	6.58
C31H/20	1456	1950	34	4	4	4.5	3.63	5.20
			41	**3.3**	**7.6**	**4.4**	**2.46**	**7.93**

APPENDIX IIa (contd.)

INDIVIDUAL SAMPLE DETAILS AFTER 56 WEEKS EXPOSURE

Sample No	OD Wt Calc	Weight Wet	MC %	Ratings			Deflect (mm)	MOE (GPa)
				Mycel	Decay	Mould		
HMC/ 3-week predecay, Copper naphthenate treatment 2 edges								
C32H/1	1553	**Failed 48 weeks**			0		8.00	2.29
C32H/2	1658	2215	34	4	9	4.5	2.24	8.23
C32H/3	1665	2391	44	5	6	4.5	2.92	6.00
C32H/4	1923	2625	37	4	7	4.5	2.07	8.63
C32H/5	1697	2308	36	4	8	4.5	2.15	8.57
C32H/6	1664	2222	34	4	7	4	2.53	7.47
C32H/7	1697	2302	36	3	9	4	2.44	7.45
C32H/8	1995	2664	34	4	7	4.5	2.69	6.93
C32H/9	1817	2984	64	2	9	4.5	2.34	7.58
C32H/10	1901	2533	33	1	T	3.5	1.72	10.88
C32H/11	1795	2414	34	2	8	4.5	1.84	10.03
C32H/12	1678	2240	33	4	7	3	2.08	9.04
C32H/13	1987	2649	33	4	8	4.5	2.18	8.36
C32H/14	1789	2400	34	3	8	3.5	2.08	8.55
C32H/15	1796	2373	32	3	8	4.5	1.73	10.26
C32H/16	1888	2736	45	3	8	4	2.18	8.44
C32H/17	1429	2135	49	4	6	4.5	3.04	5.98
C32H/18	1622	2160	33	4	8	4	2.15	8.48
C32H/19	1983	2578	30	1	10	2.5	1.89	9.85
C32H/20	1916	2581	35	1	7	4	1.79	10.61
			37	**3.2**	**7.9**	**4.1**	**2.50**	**8.18**

APPENDIX IIa (contd.)

INDIVIDUAL SAMPLE DETAILS AFTER 56 WEEKS EXPOSURE

Sample No	OD Wt Calc	Weight Wet	MC %	Ratings			Deflect (mm)	MOE (GPa)
				Mycel	Decay	Mould		
HMC/3-week predecay, Copper naphthenate treatment 1 face, 2 edges								
C33H/1	1819	2439	34	3	9	3	2.45	7.50
C33H/2	1673	2236	34	3	9	3	3.60	5.26
C33H/3	1755	2301	31	1	9	3	2.52	7.40
C33H/4	1946	2569	32	3	7	4.5	1.86	10.23
C33H/5	2014	2942	46	4	8	3.5	1.84	9.87
C33H/6	1799	2375	32	1	9	4	2.28	8.42
C33H/7	1842	2926	59	1	9	4	1.97	9.16
C33H/8	1636	2183	33	3	9	4	2.16	8.94
C33H/9	1866	2364	27	1	9	3.5	2.55	7.57
C33H/10	2091	2743	31	1	9	2.5	1.33	13.38
C33H/11	1598	2469	55	1	9	3	2.44	7.46
C33H/12	1608	2130	32	2	9	3	2.36	8.24
C33H/13	1547	2099	36	1	9	3.5	3.55	5.44
C33H/14	1623	2214	36	1	8	3.5	2.70	6.91
C33H/15	1717	2574	50	4	8	4	2.24	8.22
C33H/16	1539	2049	33	2	9	3	3.17	6.15
C33H/17	1634	2305	41	1	8	4	2.18	8.66
C33H/18	1748	2301	32	2	9	4.5	2.96	6.24
C33H/19	1509	2046	36	2	9	2.5	3.20	5.85
C33H/20	1761	2349	33	4	8	4.5	2.03	8.93
			37	**2.1**	**8.7**	**3.5**	**2.47**	**7.99**

APPENDIX IIa (contd.)

INDIVIDUAL SAMPLE DETAILS AFTER 56 WEEKS EXPOSURE

Sample No	OD Wt Calc	Weight Wet	MC %	Ratings			Deflect (mm)	MOE (GPa)
				Mycel	Decay	Mould		
HMC/ 3-week predecay, Copper naphthenate treatment 4 sides								
C34H/1	1756	2360	34	1	9	2.5	1.81	10.23
C34H/2	1576	2261	43	1	8	3	3.20	5.71
C34H/3	1577	2534	61	3	9	3	2.98	6.34
C34H/4	1737	2307	33	1	9	2.5	2.17	8.56
C34H/5	1830	2459	34	1	9	2.5	2.03	8.99
C34H/6	1997	2782	39	1	9	2	2.05	8.95
C34H/7	1633	2552	56	3	9	4	2.24	8.40
C34H/8	1684	2189	30	1	9	2.5	2.58	7.18
C34H/9	1722	2328	35	2	8	3	1.97	9.30
C34H/10	1608	2248	40	1	8	2.5	2.84	6.70
C34H/11	1802	2384	32	1	9	2	1.86	10.21
C34H/12	1557	2197	41	1	T	2.5	3.00	6.59
C34H/13	1873	2533	35	1	9	2.5	1.78	10.16
C34H/14	1489	1985	33	1	8	3	2.38	7.97
C34H/15	1783	2393	34	1	10	3	2.43	8.13
C34H/16	1806	2442	35	1	8	2.5	2.67	6.85
C34H/17	1869	2492	33	1	9	2.5	1.78	10.33
C34H/18	1737	2333	34	1	8	3.5	1.65	11.02
C34H/19	1899	2512	32	1	9	3	1.57	11.64
C34H/20	1540	2347	52	2	9	3	2.78	7.02
			39	**1.3**	**8.8**	**2.8**	**2.29**	**8.51**

APPENDIX IIa (contd.)

INDIVIDUAL SAMPLE DETAILS AFTER 56 WEEKS EXPOSURE

Sample No	OD Wt Calc	Weight Wet	MC %	Ratings			Deflect (mm)	MOE (GPa)
				Mycel	Decay	Mould		
HMC/ 3-week predecay, Boron treatment 1 edge								
B31H/1	1782	2377	33	6	6	5	2.64	7.09
B31H/2	1836	2399	31	4	7	5	4.79	3.80
B31H/3	2053	2700	32	4	7	5	1.86	9.47
B31H/4	1733	2252	30	4	7	4.5	2.80	7.05
B31H/5	1624	2343	44	4	6	5	3.16	6.18
B31H/6	1607	2262	41	4	6	4.5	2.46	7.65
B31H/7	1556	2164	39	4	6	5	3.84	5.06
B31H/8	1569	2075	32	4	7	5	3.73	5.19
B31H/9	1592	2045	28	2	8	4	2.56	7.51
B31H10	1922	2622	36	4	7	5	2.08	8.52
B31H/11	1676	2326	39	5	6	5	2.32	8.10
B31H/12	1694	2453	45	5	6	5	3.30	5.40
B31H/13	1742	2301	32	4	7	4.5	2.10	8.75
B31H/14	1664	2165	30	4	7	5	2.83	6.48
B31H/15	1735	2315	33	4	7	4.5	2.21	8.37
B31H/16	1585	2056	30	4	7	5	3.30	5.93
B31H/17	1647	2148	30	5	7	5	2.19	8.42
B31H/18	1835	2403	31	3	8	4.5	1.74	10.69
B31H/19	1697	2230	31	4	7	4.5	2.08	8.80
B31H/20	1789	2336	31	3	8	4.5	1.86	10.12
			34	**4.1**	**6.9**	**4.8**	**2.69**	**7.43**

APPENDIX IIa (contd.)

INDIVIDUAL SAMPLE DETAILS AFTER 56 WEEKS EXPOSURE

Sample No	OD Wt Calc	Weight Wet	MC %	Ratings			Deflect (mm)	MOE (GPa)
				Mycel	Decay	Mould		
HMC/ 3-week predecay, Boron treatment 2 edges								
B32H/1	1735	2699	56	1	10	5	3.32	5.66
B32H/2	1761	2354	34	1	9	4.5	1.95	9.43
B32H/3	1766	2375	34	1	9	4.5	1.71	10.55
B32H/4	1662	2337	41	1	T	4.5	2.32	8.03
B32H/5	1963	2634	34	1	9	5	2.01	8.98
B32H/6	1760	2330	32	1	T	4.5	2.11	8.61
B32H/7	1782	2347	32	1	T	4	2.13	8.72
B32H/8	1742	2360	35	2	9	5	2.36	7.90
B32H/9	1816	2437	34	1	T	5	1.85	9.89
B32H/10	1630	2127	30	1	T	4	2.25	8.39
B32H/11	1721	2298	34	3	7	5	1.85	10.13
B32H/12	1997	2695	35	1	8	5	2.12	8.42
B32H/13	1869	2591	39	5	6	5	1.76	10.44
B32H/14	1878	2467	31	4	8	5	2.02	9.37
B32H/15	1629	2475	52	1	9	5	2.26	7.98
B32H/16	1457	1930	32	1	9	5	3.34	5.76
B32H/17	1743	2330	34	1	T	5	3.11	5.98
B32H/18	1789	2352	31	2	9	4.5	2.14	8.71
B32H/19	1806	2371	31	1	9	4.5	2.23	8.48
B32H/20	1495	2183	46	4	8	5	3.25	5.70
			36	**1.7**	**9.0**	**4.8**	**2.30**	**8.36**

APPENDIX IIa (contd.)

INDIVIDUAL SAMPLE DETAILS AFTER 56 WEEKS EXPOSURE

Sample No	OD Wt Calc	Weight Wet	MC %	Ratings			Deflect (mm)	MOE (GPa)
				Mycel	Decay	Mould		
HMC/ 3-week predecay, Boron treatment 1 face, 2 edges								
B33H/1	1599	2584	62	1	10	4.5	2.64	6.86
B33H/2	1843	2561	39	1	10	3.5	1.71	10.66
B33H/3	1561	2145	37	1	T	3.5	3.75	4.83
B33H/4	1813	2524	39	1	9	4	2.44	7.66
B33H/5	1845	2603	41	1	T	4.5	3.16	5.96
B33H/6	1781	2467	39	1	9	4	2.53	7.55
B33H/7	1695	2419	43	1	T	4	2.03	9.11
B33H/8	1816	2578	42	1	T	3.5	2.44	7.52
B33H/9	1793	2424	35	1	10	3	1.86	10.02
B33H/10	1615	2311	43	1	T	4	2.20	8.25
B33H/11	1644	2239	36	1	9	3.5	2.72	6.99
B33H/12	1861	2589	39	1	9	4	2.07	8.97
B33H/13	1703	2354	38	1	9	3.5	2.05	8.99
B33H/14	1837	2483	35	1	10	3	1.63	11.06
B33H/15	1964	3069	56	1	9	3	1.67	10.85
B33H/16	1630	2324	43	1	8	4	2.87	6.63
B33H/17	1809	2888	60	1	T	4.5	2.11	8.93
B33H/18	1744	2417	39	1	T	4	1.76	10.41
B33H/19	1685	2483	47	1	T	4.5	2.25	8.27
B33H/20	1546	2204	43	1	10	4	2.72	7.01
			43	**1.0**	**9.5**	**3.8**	**2.33**	**8.33**

APPENDIX IIa (contd.)

INDIVIDUAL SAMPLE DETAILS AFTER 56 WEEKS EXPOSURE

Sample No	OD Wt Calc	Weight Wet	MC %	Ratings			Deflect (mm)	MOE (GPa)
				Mycel	Decay	Mould		
HMC/ 3-week predecay, Boron treatment 4 sides								
B34H/1	1623	2548	57	1	T	3	2.82	6.48
B34H/2	1871	3057	63	1	T	3	1.52	11.91
B34H/3	1469	2327	58	1	9	3	2.35	8.07
B34H/4	1936	3145	62	1	T	4	3.24	6.24
B34H/5	1809	2805	55	1	9	2.5	2.11	8.98
B34H/6	1471	2070	41	1	T	3	2.71	7.23
B34H/7	1791	2941	64	1	9	3.5	1.65	11.07
B34H/8	1793	2563	43	1	9	3	2.01	9.03
B34H/9	1816	2544	40	1	10	2	1.94	9.56
B34H/10	1758	2454	40	1	9	3	1.61	11.32
B34H/11	1822	2598	43	1	9	3	1.75	10.33
B34H/12	1666	2514	51	1	9	3	2.23	8.51
B34H/13	1671	2442	46	1	9	2.5	1.81	10.37
B34H/14	1492	2213	48	1	9	3	2.93	6.50
B34H/15	1868	3203	71	1	9	3	1.74	10.44
B34H/16	1804	2694	49	1	T	2.5	1.97	9.23
B34H/17	2125	2089	-2	1	9	3	1.64	11.06
B34H/18	1621	2562	58	1	9	3	2.17	8.96
B34H/19	1635	2367	45	1	9	3.5	2.79	6.80
B34H/20	1737	2843	64	1	9	3.5	2.53	7.42
			50	**1.0**	**9.3**	**3.0**	**2.18**	**8.98**

APPENDIX IIa (contd.)

INDIVIDUAL SAMPLE DETAILS AFTER 56 WEEKS EXPOSURE

Sample No	OD Wt Calc	Weight Wet	MC %	Ratings			Deflect (mm)	MOE (GPa)
				Mycel	Decay	Mould		
HMC/ 3-week predecay, H1.2 Boron treatment								
B3H/1	1481	1991	34	1	10	2	3.25	5.77
B3H/2	1507	2500	66	1	10	2	5.06	3.66
B3H/3	1263	1852	47	1	10	2.5	5.27	3.76
B3H/4	1356	2228	64	1	10	3	3.43	5.73
B3H/5	1344	1860	38	1	10	2.5	3.10	6.23
B3H/6	1511	2803	86	1	10	2.5	4.01	4.71
B3H/7	1504	2594	72	1	10	3	3.98	4.78
B3H/8	1554	2124	37	1	10	2	3.73	5.18
B3H/9	1514	2495	65	1	10	2.5	3.68	5.04
B3H/10	1533	2274	48	1	10	2.5	5.60	3.23
B3H/11	1537	2510	63	1	10	2	3.94	4.74
B3H/12	1404	1858	32	1	10	2	3.30	5.79
B3H/13	1546	2292	48	1	10	2	6.13	3.20
B3H/14	1468	2395	63	1	10	3.5	2.86	6.81
B3H/15	1617	2197	36	1	10	2	3.25	5.95
B3H/16	1404	2068	47	1	10	2	2.80	6.74
B3H/17	1493	2611	75	1	10	2	3.10	6.27
B3H/18	1262	1805	43	1	10	2	3.93	5.00
B3H/19	1411	2283	62	1	10	2	3.27	5.92
B3H/20	1351	1852	37	1	10	3	3.82	5.21
			53	**1.0**	**10.0**	**2.4**	**3.88**	**5.19**

APPENDIX IIa (contd.)

INDIVIDUAL SAMPLE DETAILS AFTER 56 WEEKS EXPOSURE

Sample No	OD Wt Calc	Weight Wet	MC %	Ratings			Deflect (mm)	MOE (GPa)
				Mycel	Decay	Mould		
HMC/ 3-week predecay, Untreated Controls								
U3H/1	1775	2294	29	4	8	4.5	2.61	7.11
U3H/2	2026	2588	28	5	7	5	1.92	9.43
U3H/3	1579	2079	32	3	8	3.5	2.40	7.88
U3H/4	1875	2494	33	4	8	4	2.66	6.89
U3H/5	1545	1986	29	6	6	3.5	2.62	7.12
U3H/6	1695	2199	30	4	7	4.5	3.27	5.93
U3H/7	1821	2431	33	1	9	4.5	2.02	9.50
U3H/8	1650	2209	34	3	8	3.5	4.02	4.81
U3H/9	1662	2142	29	5	6	5	3.12	5.86
U3H/10	1985	2721	37	6	4	na	3.03	5.93
U3H/11	1774	2295	29	4	7	4.5	4.65	4.13
U3H/12	1830	2753	50	1	8	4	2.20	8.60
U3H/13	1813	2301	27	5	6	5	2.45	7.54
U3H/14	1727	2230	29	4	7	4.5	1.85	10.03
U3H/15	1624	2140	32	3	8	3	2.29	7.89
U3H/16	2038	2606	28	4	8	4.5	2.14	8.88
U3H/17	1907	2551	34	4	7	4	1.84	10.27
U3H/18	1472	1981	35	4	8	3.5	3.10	6.11
U3H/19	1600	2148	34	5	7	5	2.39	7.57
U3H/20	1490	2137	43	3	6	4.5	2.60	6.86
			33	**3.9**	**7.2**	**4.2**	**2.66**	**7.42**

APPENDIX IIa (contd.)

INDIVIDUAL SAMPLE DETAILS AFTER 56 WEEKS EXPOSURE

Sample No	OD Wt Calc	Weight Wet	MC %	Ratings			Deflect (mm)	MOE (GPa)
				Mycel	Decay	Mould		
HMC/No predecay, Moisture Content Untreated Controls								
UMH/1	1738	2434	40	4	T	4.5	2.75	6.97
UMH/2	1806	2337	29	2	T	5	1.90	9.81
UMH/3	1906	2501	31	1	10	3	1.47	12.26
UMH/4	1653	2184	32	3	9	5	2.17	8.30
UMH/5	1660	2263	36	3	T	4	2.46	7.71
UMH/6	1724	2246	30	2	10	5	3.15	6.00
UMH/7	1940	2908	50	4	9	5	1.76	10.10
UMH/8	1635	2255	38	4	8	5	3.36	5.63
UMH/9	1932	2536	31	1	10	4.5	1.83	9.79
UMH/10	1887	2474	31	1	10	3	1.73	10.74
UMH/11	1558	2110	35	4	T	4.5	3.06	6.47
UMH/12	1581	2194	39	2	T	4.5	2.70	6.97
UMH/13	1683	2290	36	2	T	5	3.08	6.13
UMH/14	1849	2416	31	1	10	3.5	1.81	10.06
UMH/15	1594	2098	32	5	7	5	2.45	7.58
UMH/16	2019	2632	30	1	10	4.5	1.54	12.06
UMH/17	1752	2292	31	4	8	5	2.67	7.06
UMH/18	1889	3148	67	5	8	4.5	1.86	9.81
UMH/19	1963	2787	42	4	8	5	1.94	8.99
UMH/20	1936	2495	29	1	10	2.5	1.88	9.80
			36	**2.7**	**9.4**	**4.4**	**2.28**	**8.61**

APPENDIX IIb (contd.)

INDIVIDUAL SAMPLE DETAILS AFTER 56 WEEKS EXPOSURE

Sample No	OD Wt Calc	Weight Wet	MC %	Ratings			Deflect (mm)	MOE (GPa)
				Mycel	Decay	Mould		
LMC/6 weeks predecay, Copper naphthenate treated 2 edges								
C62L/1	1741	2107	21	4	7	4.5	1.93	9.73
C62L/2	1568	1937	24	3	7	3.5	2.56	7.55
C62L/3	1865	2311	24	2	8	4	1.73	11.10
C62L/4	1693	2034	20	4	6	4.5	2.70	7.32
C62L/5	1845	2286	24	4	7	4.5	2.80	6.91
C62L/6	1601	**Failed 40 weeks**			0		8.00	2.38
C62L/7	1552	1839	18	4	6	3.5	5.05	3.83
C62L/8	1760	2181	24	3	7	4	1.74	11.08
C62L/9	1691	2133	26	3	8	4	2.61	7.45
C62L/10	1419	1758	24	1	8	4.5	2.77	7.07
			23	**3.1**	**6.4**	**4.1**	**3.19**	**7.44**
LMC/6 weeks predecay, Copper naphthenate treated 4 sides								
C64L/1	1645	2090	27	3	8	4	2.60	6.96
C64L/2	1861	2329	25	1	8	3.5	1.87	10.14
C64L/3	1740	2193	26	1	8	2.5	1.76	10.68
C64L/4	1898	2314	22	1	8	3.5	1.48	12.77
C64L/5	1937	2436	26	1	8	3.5	1.67	11.06
C64L/6	1728	2131	23	1	8	3.5	1.97	9.70
C64L/7	1622	2053	27	2	8	4	4.57	4.05
C64L/8	1689	2143	27	1	8	4	2.85	6.89
C64L/9	1692	2136	26	1	7	3	1.83	10.39
C64L/10	1699	2126	25	1	8	3	2.85	6.86
			25	**1.3**	**7.9**	**3.5**	**2.35**	**8.95**
LMC/6 weeks predecay, Boron treated 2 edges								
B62L/1	1640	2064	26	1	8	3.5	1.94	9.98
B62L/2	1975	2469	25	2	9	3	1.64	11.28
B62L/3	1892	2322	23	4	7	3.5	1.49	12.50
B62L/4	1768	2217	25	1	8	3.5	1.90	9.92
B62L/5	1907	2393	25	1	8	3.5	1.67	11.27
B62L/6	1630	2025	24	4	7	4.5	2.95	6.28
B62L/7	1661	2085	26	3	8	4	2.96	6.64
B62L/8	1763	2217	26	1	8	3.5	1.86	10.18
B62L/9	1718	2170	26	3	8	4.5	2.92	6.69
B62L/10	1739	2036	17	4	6	4.5	6.18	3.22
			24	**2.4**	**7.7**	**3.8**	**2.55**	**8.80**

APPENDIX IIb (contd.)

INDIVIDUAL SAMPLE DETAILS AFTER 56 WEEKS EXPOSURE

Sample No	OD Wt Calc	Weight Wet	MC %	Ratings			Deflect (mm)	MOE (GPa)
				Mycel	Decay	Mould		
LMC/6 weeks predecay, Boron treated 4 sides								
B64L/1	1798	2286	27	1	8	2	1.62	11.66
B64L/2	1637	2077	27	1	8	2	2.45	7.89
B64L/3	1758	2239	27	1	8	2	1.90	9.70
B64L/4	1573	2075	32	1	8	2	2.39	8.18
B64L/5	1715	2233	30	1	8	2	2.27	8.25
B64L/6	1681	2143	27	1	8	2	1.80	10.31
B64L/7	1612	2084	29	1	8	2	3.34	5.52
B64L/8	1811	2490	37	1	8	4	2.70	7.31
B64L/9	1709	2152	26	1	8	2	1.74	10.90
B64L/10	1837	2385	30	1	8	3	2.71	6.92
			29	**1.0**	**8.0**	**2.3**	**2.29**	**8.66**
LMC/3 weeks predecay, Copper naphthenate treated 2 edges								
C32L/1	1589	2034	28	1	9	4	2.34	7.88
C32L/2	1884	2379	26	2	8	4	1.87	9.99
C32L/3	1663	2146	29	4	7	4	2.12	9.38
C32L/4	1684	2099	25	1	9	3.5	2.09	9.31
C32L/5	1825	2244	23	4	7	4	1.97	9.69
C32L/6	1879	2371	26	3	8	4	1.84	10.18
C32L/7	1518	1916	26	2	8	4.5	2.69	7.34
C32L/8	1584	2009	27	3	8	4	1.76	10.49
C32L/9	1728	2156	25	1	8	4	2.46	7.91
C32L/10	1986	2490	25	1	9	4.5	3.01	6.58
			26	**2.2**	**8.1**	**4.1**	**2.22**	**8.87**
LMC/3 weeks predecay, Copper naphthenate treated 4 sides								
C34L/1	1753	2203	26	1	8	2	1.83	10.51
C34L/2	1843	2307	25	1	8	3.5	1.61	11.82
C34L/3	1605	2064	29	1	9	4.5	2.31	8.31
C34L/4	1959	2479	27	1	9	4.5	1.62	11.32
C34L/5	1789	2275	27	1	8	3	1.88	9.80
C34L/6	1810	2299	27	1	8	4	2.80	6.90
C34L/7	1725	2185	27	1	8	3.5	1.74	11.17
C34L/8	1838	2376	29	1	8	4.5	2.02	9.39
C34L/9	1662	2078	25	1	8	2	2.83	7.02
C34L/10	1579	1977	25	1	8	4	2.17	9.00
			27	**1.0**	**8.2**	**3.6**	**2.08**	**9.52**

APPENDIX IIb (contd.)

INDIVIDUAL SAMPLE DETAILS AFTER 56 WEEKS EXPOSURE

Sample No	OD Wt Calc	Weight Wet	MC %	Ratings			Deflect (mm)	MOE (GPa)
				Mycel	Decay	Mould		
LMC/3 weeks predecay, Boron treated 2 edges								
B32L/1	1750	2241	28	1	8	4	1.98	9.50
B32L/2	1862	2342	26	1	8	3.5	1.67	11.27
B32L/3	1685	2133	27	2	9	4.5	2.55	7.36
B32L/4	1765	2224	26	1	8	3.5	1.74	10.71
B32L/5	1687	2131	26	1	8	3.5	1.91	9.93
B32L/6	1973	2508	27	1	8	4.5	1.54	12.09
B32L/7	1702	2144	26	1	9	4	2.95	6.46
B32L/8	1636	2061	26	1	9	3	2.64	7.26
B32L/9	1729	2350	36	1	8	5	2.21	8.63
B32L/10	2037	2579	27	1	8	3	1.73	10.77
			27	**1.1**	**8.3**	**3.9**	**2.09**	**9.40**
LMC/3 weeks predecay, Boron treated 4 sides								
B34L/1	1799	2391	33	1	8	2	1.71	11.13
B34L/2	1738	2187	26	1	9	2.5	2.44	7.82
B34L/3	1569	2071	32	1	9	2	2.22	8.64
B34L/4	1556	2005	29	1	8	2	2.12	8.82
B34L/5	1699	2159	27	1	8	2	2.13	9.03
B34L/6	1705	2159	27	1	8	3	2.72	7.15
B34L/7	1329	1735	31	1	8	2	2.98	6.59
B34L/8	1755	2238	28	1	8	2	2.50	7.60
B34L/9	1630	2067	27	1	8	2	2.18	8.84
B34L/10	1794	2232	24	1	8	2	2.03	9.34
			28	**1.0**	**8.2**	**2.2**	**2.30**	**8.50**
LMC/3 weeks predecay, H 1.2 Boron treated								
B3L/1	1500	1926	28	1	10	2	3.87	4.98
B3L/2	1463	1925	32	1	10	2	3.79	5.19
B3L/3	1490	1909	28	1	10	2.5	2.57	7.69
B3L/4	1497	1893	26	1	10	2	3.54	5.54
B3L/5	1407	1781	27	1	10	2	2.95	6.81
B3L/6	1424	1845	30	1	10	2	3.11	6.36
B3L/7	1299	1662	28	1	10	2	4.12	4.73
B3L/8	1429	1806	26	1	10	2.5	3.75	5.10
B3L/9	1351	1718	27	1	10	2	3.28	5.83
B3L/10	1478	2166	47	1	10	2.5	6.36	3.92
			30	**1.1**	**10.0**	**2.2**	**3.73**	**5.61**

APPENDIX IIb (contd.)

INDIVIDUAL SAMPLE DETAILS AFTER 56 WEEKS EXPOSURE

Sample No	OD Wt Calc	Weight Wet	MC %	Ratings			Deflect (mm)	MOE (GPa)
				Mycel	Decay	Mould		
LMC/3 weeks predecay, Untreated Controls								
U3L/1	1656	2093	26	1	8	3.5	1.61	11.53
U3L/2	1689	2159	28	3	8	4.5	2.13	8.70
U3L/3	1775	2204	24	1	8	4	1.63	11.48
U3L/4	1553	1921	24	4	7	4.5	2.18	8.95
U3L/5	1770	**Failed 56 weeks**			0		8.00	2.47
U3L/6	1729	2167	25	3	8	4	3.25	5.86
U3L/7	1524	**Failed 56 weeks**			0		10.00	1.96
U3L/8	1637	2053	25	1	8	3.5	2.29	7.96
U3L/9	1779	2203	24	4	8	4	2.28	8.28
U3L/10	1588	1964	24	3	8	4.5	2.35	7.95
			25	**2.5**	**6.3**	**4.1**	**3.37**	**7.51**
LMC/No predecay, Moisture Content Untreated Controls								
UML/1	1729	2299	33	4	8	4.5	2.63	7.24
UML/2	1614	2014	25	1	10	3	2.73	7.29
UML/3	1570	2041	30	1	10	4.5	2.41	8.26
UML/4	1911	2385	25	3	10	3.5	2.02	9.49
UML/5	1679	2125	27	1	10	3.5	2.13	8.86
UML/6	1716	2159	26	1	10	4	2.33	8.12
UML/7	1464	1868	28	3	8	4	2.14	8.99
UML/8	2099	2661	27	1	10	4	1.65	10.92
UML/9	1738	2196	26	1	10	4	2.15	8.96
UML/10	1688	2114	25	1	T	4.5	2.29	8.36
			27	**1.7**	**9.6**	**4.0**	**2.25**	**8.65**