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# MOISTURE CONTENT OF EXTERIOR TIMBER IN BUSH FIRE CONDITIONS

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April 07

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## 1. INTRODUCTION

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In April 2005 Timber Queensland in their report, *Moisture Content of Exterior Timber*, outlined the effects of temperature and humidity on moisture content and section 4 of that report considered the likely moisture content that exterior timbers would attain under bushfire conditions. From meteorological data during bushfire events it was considered that

*“a relatively low average daily relative humidity of say 45% and an average daily temperature of 25°C ..... would yield an EMC of approximately 8.0%. However, due to the relatively slow response rate of higher density hardwoods, often used in bush fire prone areas, a minimum timber thickness of about 19 mm and the hysteresis effect, then the moisture contents are likely to remain at least 1% to 2% higher than the EMC. Therefore 9% to 10% could be expected.”*

The report then indicated that this estimate would relate to sheltered covered conditions and would not take into consideration sun exposure or coating colour etc. Finally from studies undertaken by Warrington Fire Research it was reported that they too considered that average relative humidities preceding bushfires were not excessively low.

It was considered beneficial to further substantiate these findings through field trials and the purpose of this report is to outline the findings from the field work undertaken. Timber of three different species was placed in bushfire areas of Victoria, New South Wales and Queensland and their moisture contents monitored during the summer bushfire period of 2006/2007.

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## 2. METHODOLOGY

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### 2.1 INTRODUCTION

It was considered that a realistic guide to timber moisture content in bushfire conditions could be gained from using moisture meters in timber test samples with results correlated with EMC's estimated from weather data. The RH and temperature at 9 am would provide reasonable daily averages for estimating EMC's. The RH and temperature at 3 pm, also available, is close to the lowest RH for the day and highest temperature. This is indicative of the driest conditions for the day. For states that were in "day light saving" the time for collection needed to be close to 10 am and 4 pm.

Moisture contents taken from top and bottom of sample boards provide an indication of the moisture differences between upper and lower case. Test samples were prepared in one location from matched material and the samples set up and monitored in the two bush fire prone states of Victoria and NSW and also Queensland. Two sets of samples were provided for each location with one placed in a shaded area under cover and the other set of samples placed where they would be subject to direct sun and rain exposure.

### 2.2 TEST SAMPLES

Samples prepared as per Figure 1 and Photo 1

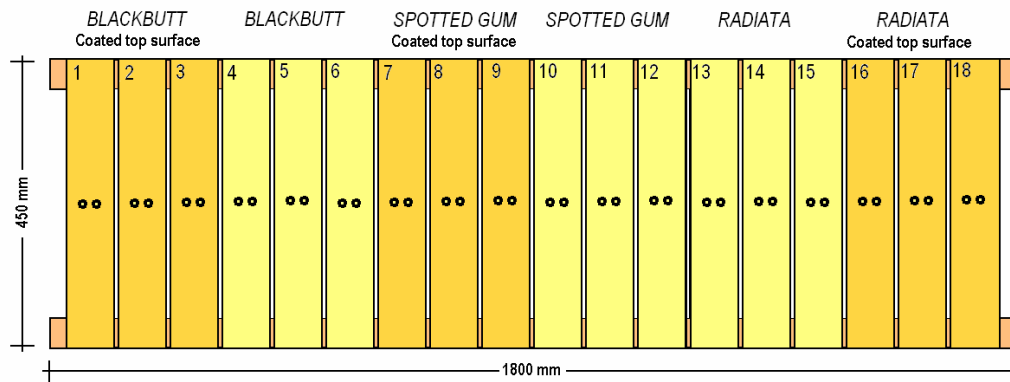


Figure 1 – Board layout



Photo 1 – Board layout

### 2.3 SAMPLE SPECIFICATIONS & TESTING

- Two sets of sample as per Figure 1 were prepared for each location.
- One set of samples was sun/rain exposed, the other located under cover but open to the air.

- Three boards of each species were coated, top surface only, with two coats of decking oil and three of each species were not coated. Board ends were sealed.
- Boards with moisture contents generally in the range from 10% to 13% were used.
- Moisture contents were tested by resistance meter and oven dry testing at the time of board preparation.
- Resistance meter readings were written on boards before wrapping and transport to each test site and oven dry test results were also provided to each location.
- Stainless steel screws (set approx. 1/3 depth) were used to assist with regular MC testing and provide consistency of depth.
- Moisture contents were measured by weight change where necessary. Board weights were recorded on the boards.
- Boards were marked with the sample board number, test site and location as shown in Figure 2.

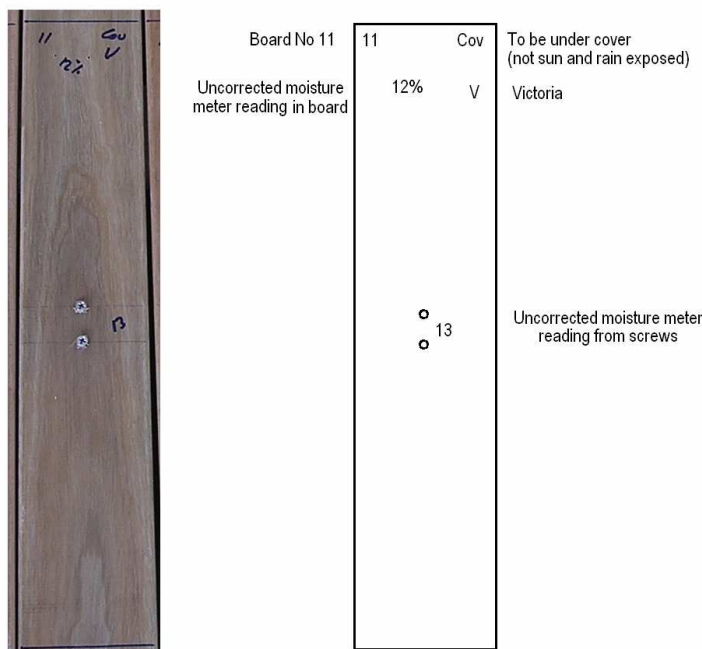


Figure 2 – Board details

- Regular MC testing of the top and bottom of sample boards was undertaken
- Note that wood temperature correction of moisture meter readings was considered. At low moisture contents the effect of temperature on meter reading is less pronounced and likely to affect readings by -1%. That is a meter reading of 7% and a wood temperature of 30°C has a correction of -1%.
- Comparative check between meters - The TQ meter was checked by 'Resistance Meter Test Box' and other moisture meters were checked by comparison to sample board readings by TQ and with a resistor representing 23% moisture content.

- Note also that moisture on board surfaces does not accurately reflect board moisture content below the surface.

#### **2.4 INSTALLATION SPECIFICATION**

- Samples supported on joists at least 400 mm above ground
- Free airflow beneath

#### **2.5 SITE INFORMATION**

- Address
- Distance from nearest Bureau of Meteorology (BOM) recording station
- Photos of site and panel locations
- Any pertinent information about the site that may affect or influence trial results

#### **2.6 INFORMATION TO BE OBTAINED OR RECORDED:-**

- Daily data from BOM of FFDI, Temp RH and Wind Speed.
- Weekly MC and MC's the day after any day when the FFDI exceeds say 30 (value to be confirmed) or when "extreme" bushfire weather conditions are likely.
- Any pertinent information or observations about the samples that may affect or influence trial results.
- At the end of the project board sample boards were returned, wrapped in plastic and sealed, for oven dry testing of some boards.

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## 3. RESULTS

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### 3.1 INTRODUCTION

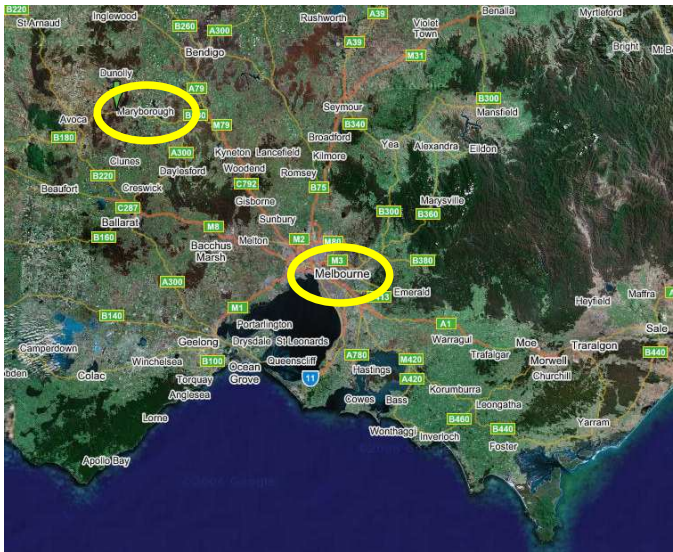
During the trial period severe bushfire conditions were not experienced in either Queensland or New South Wales. As such data recording was less frequent in these two states. However in Victoria the data was taken quite frequently in line with the more severe conditions in that locality. The results therefore concentrate on the Victorian site. The initial data relating to each sample board including resistance meter readings, oven dry test results and board masses contained in Appendix 1 - Table 1.

### 3.2 VICTORIAN RESULTS

The test site in Victoria was in Maryborough, north west of Melbourne and in this locality a BOM weather station is present. The locality is shown on Figure 3 and a general view of the area where the test samples were positioned is shown in Photo 2.

Figure 3 – Location of Maryborough, the Victorian test site

Photo 2 – General test area



(Image sourced from Google Maps - <http://maps.google.com/>)

The raw test data gathered from the site is provide in Appendix 2 with Table 2a for the boards under cover and Table 2b for the exposed boards.

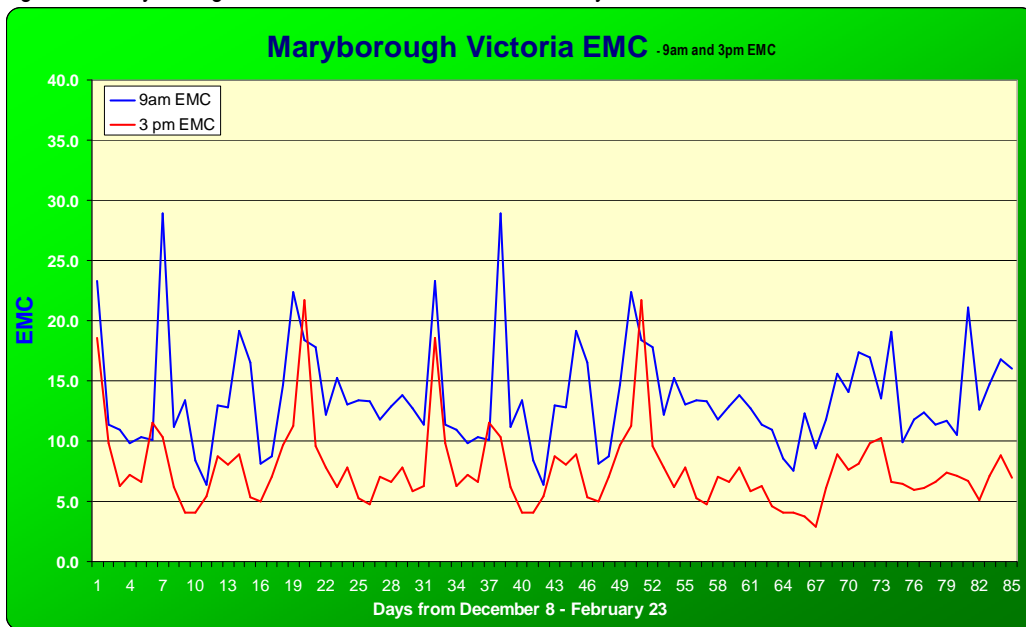
Following is a series of graphs which enables this data to be more easily viewed and interpreted.

Initially, it is of importance to consider the weather data during the trial period from the BOM weather station at Maryborough. Weather information for relative humidity and temperature is available for 9am and 3pm and through standard equations, the equilibrium moisture content (EMC) can be calculated. The EMC is the moisture content that timber will approach under set conditions of relative humidity and temperature. In basic terms, if the timber moisture content is 15% and the EMC is 12%, then the timber will loose

moisture over time and approach 12% moisture content. Similarly if the timber moisture content is 9% and the EMC is 12%, then the timber will gain moisture over time and again approach 12% moisture content.

Figure 4 provides the EMC graphs for Maryborough during the trial period from both the 9am data (more indicative of daily averages) and 3pm data (more indicative of the driest part of the day).

Figure 4 –Maryborough EMC's - 8 December to 23 February



As indicated above measurements were not taken on a daily basis at the test site. However when days of very high FFDI or when total fire bans were enforced, data was generally recorded. Part way through the trial it became apparent that moisture meter readings were sufficiently low in the Radiata to warrant calculating the moisture content by mass change. When this was introduced it was undertaken for each of the three species.

The graphs in Figures 5 to 10 provide information for Radiata, Spotted Gum and Blackbutt that was in an external location under cover. The dates relating to the data points (x axis) and additional information can be obtained from Appendix 2 – Table 2a. Days of total fire bans and high FFDI are also shown on the graphs. The graphs are based on the average for the three boards in each group.

These graphs provide the following information:-

- Corrected resistance moisture meter readings on the top of the boards
- Corrected resistance moisture meter readings on the bottom of the boards
- The average moisture content by mass
- The EMC calculated off 3pm data

A similar set of graphs in Figures 11 to 16 are provided for the Radiata, Spotted Gum and Blackbutt samples that were exposed.

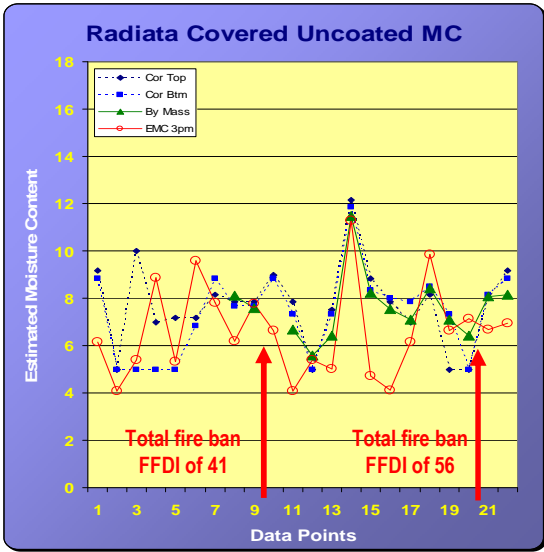


Figure 5 – Radiata – Covered – Surface uncoated

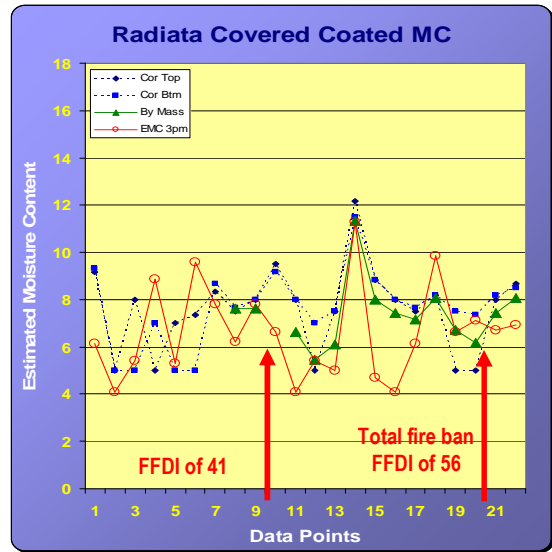


Figure 8 – Radiata – Covered – Surface coated

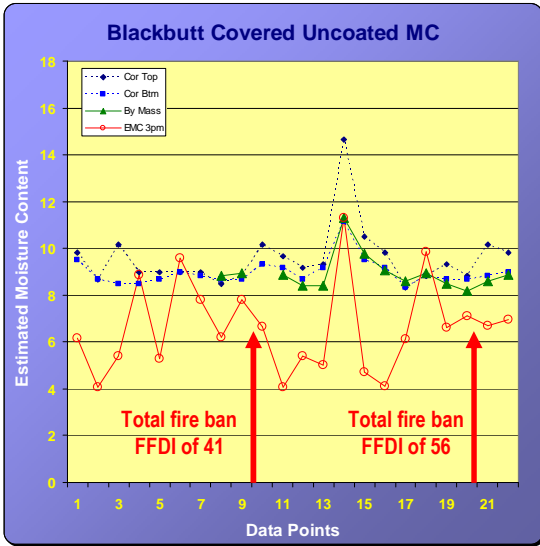


Figure 6 – Blackbutt – Covered – Surface uncoated

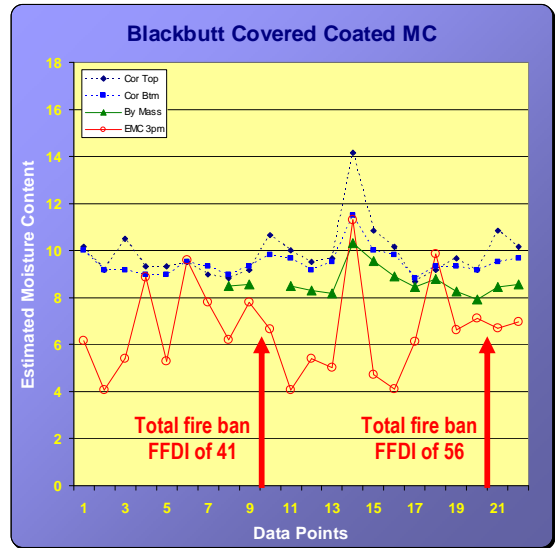


Figure 9 – Blackbutt – Covered – Surface coated

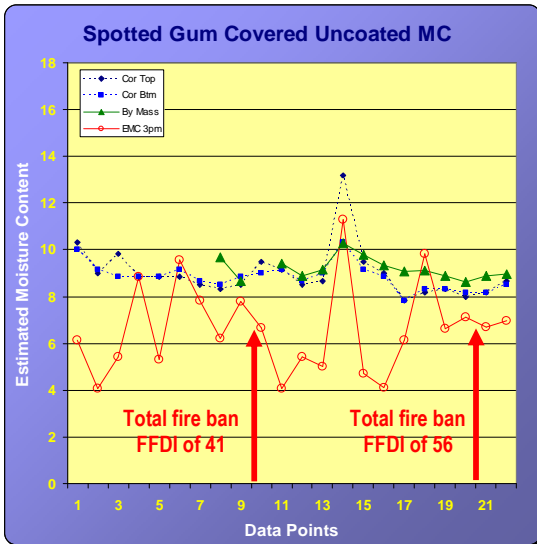


Figure 7 – Spotted Gum – Covered – Surface uncoated

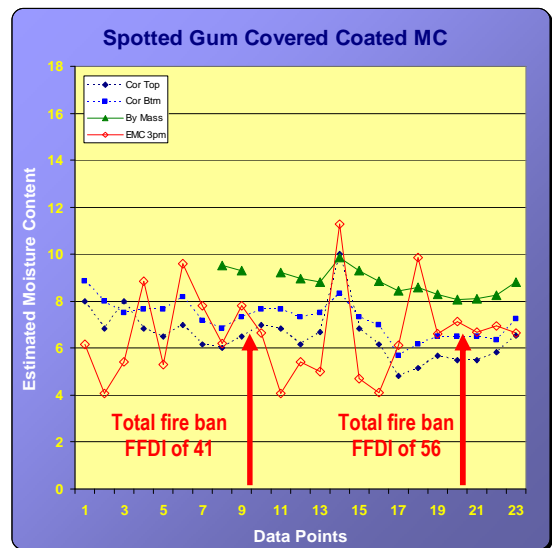


Figure 10 – Spotted Gum – Covered – Surface coated

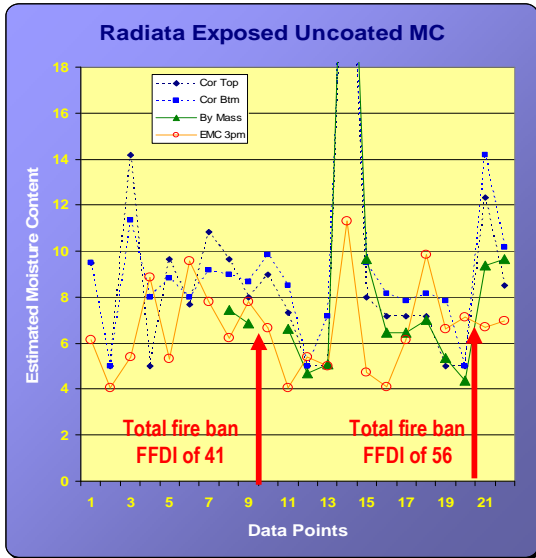


Figure 11 – Radiata – Exposed – Surface uncoated

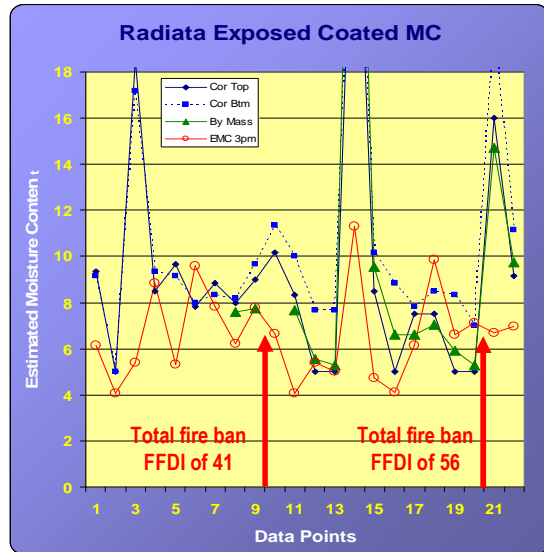


Figure 14 – Radiata – Exposed – Surface coated

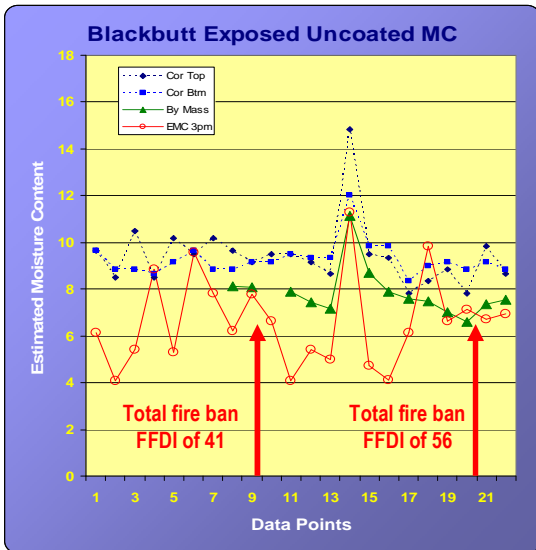


Figure 12 – Blackbutt – Exposed – Surface uncoated

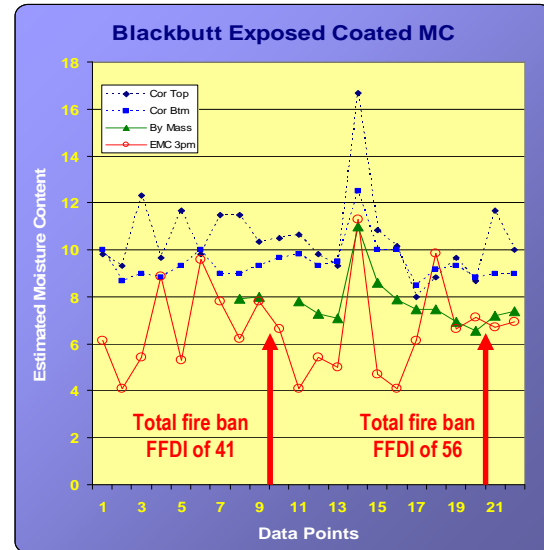


Figure 15 – Blackbutt – Exposed – Surface coated

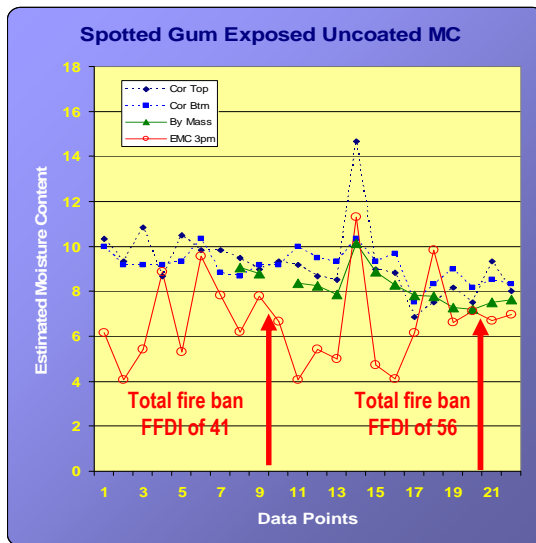


Figure 13 – Spotted Gum – Exposed – Surface uncoated

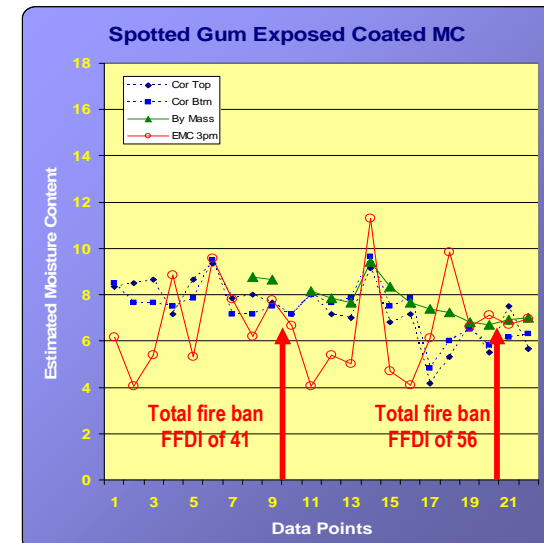


Figure 16 – Spotted Gum – Exposed – Surface coated

The data from NSW and Queensland is summarised in Tables 3a to 3d of Appendix 3. It is evident from this data that in both states the average moisture meter readings in all three species were only a little higher than they were in Victoria, however the same bush fire conditions were not experienced. Table 4 indicates the maximum and minimum estimated moisture contents from the outer case for each species in each of the three states during the trial period.

Table 4 – Maximum and Minimum Average Moisture Contents NSW and Qld

		Annangrove NSW	The Gap Qld	Maryborough Vic
Radiata	Minimum MC	6 %	8 %	5%
	Maximum MC	31 %	25 %	30%
Spotted Gum	Minimum MC	6 %	6 %	6%
	Maximum MC	13 %	14 %	15%
Blackbutt	Minimum MC	8 %	9 %	8%
	Maximum MC	17 %	14 %	17%

Photo 3 – Exposed test site NSW



Photo 4 – Covered test site Queensland



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## 4. INTERPRETATION OF RESULTS

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### 3.1 INTRODUCTION

Initially it is important to note that the three species trialed differ in their moisture uptake and loss characteristics. Radiata is a softwood and has the characteristics of being very responsive to humidity changes and therefore moisture content changes closely follow environmental conditions. Both Blackbutt and Spotted Gum are hardwoods and are categorised as species suitable for use in bushfire prone areas. Their characteristics do however differ in that Blackbutt is more responsive to environmental changes with regard to moisture uptake and loss. Blackbutt is however less responsive than Radiata. To illustrate this, if we placed samples of each of these species, all at say 10% moisture content, in a conditioning chamber where the EMC was 18% then after 21 days the moisture content of the Radiata would be approximately 16.5%, Blackbutt 14.5% and Spotted Gum 13%. (*Figures based on data from FWPRDC Project 03.2104*). When evaluating the results it is important to keep this in mind and realize that even under sustained conditions the moisture contents of timber approached but did not reach the chamber EMC.

### 3.2 EMC DATA IN MARYBOROUGH – VICTORIA

From Figure 4 it is evident that the 9am EMC always remained higher than the 3pm EMC and this would be expected. Points to note from these graphs are:-

- The difference in average EMC between 9am and 3pm over the period was approximately 6%.
- The 9am average was 13.5% and the 3pm average was 7.6%.
- The highest 3pm EMC was 21.7% and the lowest 3pm EMC was 2.9%.

### 3.3 MOISTURE CONTENT DATA IN MARYBOROUGH – VICTORIA

Interpretation of the graphs provides the following:-

#### *Coatings*

- It is evident from Figures 5 to 16 that the coatings applied to the exposed top surface of the sample boards do not significantly influence the board moisture contents attained.

#### *Radiata*

- The estimated moisture content of the Radiata more closely resembles the 3pm EMC calculated from weather data but was still generally a little higher.
- The exposed Radiata samples attained very high moisture contents (above 20%) when they became rain wet.

#### *Blackbutt and Spotted Gum*

- Both the Blackbutt and Spotted Gum generally remained at higher moisture contents than the 3pm EMC.
- With rain wetting there was a more modest rise in moisture content of only four or so percent when compared to Radiata.
- During wet conditions the moisture content increase in Blackbutt was greater than for Spotted Gum.
- Lower moisture content readings were obtained for Spotted Gum than Blackbutt. This could be influenced by the correction applied to

Spotted Gum that was based on the oven dry testing results. The difference between meter reading and oven dry moisture content being applied over the meter range.

- In these higher density species the average moisture content is generally between the average 9am and average 3pm EMC predicted off weather data.
- Although there are some differences in moisture meter readings top to bottom surfaces, the differences are generally less than 2% irrespective of whether the samples were under cover or not. With rain wetting the difference was higher. Generally the upper surface moisture contents of the exposed boards were lower, the exception being when rain wetting occurred.
- Minimum average board moisture content based on mass did not fall below about 7% in either Blackbutt or Spotted Gum. Under cover boards averaged about 9% and exposed about 8%.
- Moisture meter readings estimated case moisture contents of about 4 % to 5 % on some days for Spotted Gum.

### **3.4 MOISTURE CONTENT S AND TOTAL FIRE BAN DAYS**

During the period two total fire ban days were recorded and the associated FFDI's were 41 and 56. It is evident from the hardwood graphs included in figures 5 to 16 that these events do not correlate with lowest 3pm EMC. EMC is the primary influence over timber moisture content but due to the relatively slow response of timber a day of low EMC also does not necessarily indicate low moisture content. A period of low EMCs is necessary to lower hardwood moisture contents. Hence on the total fire ban day at data point 10 on the graphs (FFDI 41), exposed site timber moisture contents were not low at an estimated 8% to 10%. At data point 20 (FFDI 52) estimated timber moisture contents had dropped in line with a period of reducing EMC to approximately 6% to 7%. In contrast to this it should be noted that the day of lowest estimated moisture content during the trial (Spotted Gum at data point 17) the FFDI was only 24. This indicates that on a daily basis there is not a close relationship between FFDI, EMC and timber moisture content.

### **3.5 MOISTURE CONTENT DATA IN NSW and QUEENSLAND**

With reference to Table 4, in both these locations, the results estimated case moisture contents, estimated by moisture meter. In all three species the moisture content fell to not less than about 6%.

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## 5. CONCLUSIONS

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This study assessed the moisture contents of the three species Radiata, Blackbutt and Spotted Gum during the summer of the 2006/2007. Matched sample were set up in the states of Queensland, New South Wales and Victoria and evaluated fully exposed to the weather as well as under roof cover. The effects of coatings were also assessed.

Previous work based on weather data during bushfire conditions indicated that excessively low timber moisture contents would not result and the purpose of this study was to assess this through field trials. Of the species chosen the hardwoods Blackbutt and Spotted Gum are appropriate for use in bushfire prone areas. Radiata, a softwood, rapidly gains and loses moisture to the atmosphere depending on the conditions and it was included in the trials for this reason and to demonstrate the lag that occurs in hardwoods species.

From the study which centered on the Victoria site where extreme bushfires weather was prevalent during the period, it is concluded that:-

- Moisture contents variations in timber are species dependent. The hardwoods trialed were much slower to take up and lose moisture than the softwood and do not respond quickly to daily humidity fluctuations.
- In these hardwoods the moisture uptake or loss was also much slower than the moisture content predicted by weather conditions which not only changes rapidly over a 24 hour period but also on a day to day basis.
- During the 2006/2007 summer in Victoria, weather data at 3pm, indicative of the driest part of the day, suggested that timber would approach a low of 3%. The average being approximately 7%. This extreme predicted by weather conditions is however **not** reached by the hardwoods due to their slow response to moisture uptake and loss.
- The data indicated that although 3 pm moisture contents predicted from weather data have an averaged 7%, the hardwood moisture content averaged 9% covered and 8% exposed.
- Moisture contents toward the outer exposed surfaces of the boards are generally lower than average moisture contents of the whole piece and the study estimated these outer exposed surface moisture contents, in some instances, in the hardwoods to be as low as 4% to 5%, but generally in the range from 6% to 9%.
- The moisture contents were estimated from moisture meter readings corrected by oven dry testing that were applied directly over the reading range. In Spotted Gum the correction figures applied were high in some boards and it is considered that this may have artificially produced the 4% to 5% estimated moisture contents. Hence, these low moisture content figures should be considered with this in mind.
- On a daily basis there is not a close relationship between low relative humidity and timber moisture content. In the study period the lowest estimated timber moisture contents did not coincide with days of lowest relative humidity or extreme bushfire weather.
- Coatings applied to the upper surface of the boards also had no significant influence on board moisture content.

Conditions in NSW and Queensland were not such that there was significant concern from bushfires. However, the moisture contents attained by the samples in these two locations were only a little higher than in Victoria. This too suggests that timber moisture contents is not dependent on the actual weather conditions of the day but the conditions generally over a longer period of time.

Appendix 1  
**Table 1 - Sample Board Data**

UNCORRECTED MM and MASS		Blackbutt						Spotted Gum						Radiata					
		Coated			Uncoated			Coated			Uncoated			Uncoated			Coated		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Qld Ext	MM reading	10	12	11	10	11	10	13	16	13	12	12	13	11	9	9	9	9	10
Qld Ext	Top screw	10	12	10.5	10	10.5	9	13	15	12	12	12	13	10.5	9	8.5	9	8.5	9
Qld Ext	Btm screw	10	11	10	10.5	11	10	13	15.5	13	12	12	13	10	9	8.5	8.5	8.5	8.5
Qld Ext	Mass	615	628	591	610	617	598	795	817	754	852	835	795	506	421	401	426	420	354
Qld Cov	MM reading	10	12	11	11	11	10	15	16	13	13	13	13	10	9	9	9	9	10
Qld Cov	Top screw	10.5	12	11	10.5	11	11	13	15	12.5	13	13	13	10.5	8.5	8.5	9	8	9
Qld Cov	Btm screw	10	11	10	10	11	9.5	13	15	13	11.5	13	13	10	8.5	8.5	8.5	8.5	9
Qld Cov	Mass	610	632	596	608	605	629	786	802	810	849	83	786	481	410	401	433	424	347
NSW Ext	MM reading	10	12	10	10	11	10	14	16	12	12	12	12	10	9	9	9	9	10
NSW Ext	Top screw	10.5	11.5	10.5	11	11	10	14	15.5	13	12.5	12.5	13	10	8.5	8.5	8.5	9	8
NSW Ext	Btm screw	10.5	11	9.5	10.5	10.5	9	13	16	13	12.5	13	14	9.5	9	9	8.5	9.5	8.5
NSW Ext	Mass	616	631	605	611	595	632	781	793	796	849	831	789	463	389	391	419	422	351
Meter	MM reading	10	12	10	11	11	10	14	16	13	13	12	12	10	9	9	9	10	9
OD	Initial mass	28.13	29.31	28.40	27.84	26.89	28.75	33.99	33.10	32.97	38.30	36.55	34.19	20.68	17.90	18.75	19.94	19.98	16.26
	Final mass	25.42	26.52	25.83	25.17	24.29	26.02	30.51	29.50	29.79	34.25	33.19	30.34	18.76	16.30	17.07	18.20	18.13	14.78
	Oven Dry	10.7%	10.5%	9.9%	10.6%	10.7%	10.5%	11.4%	12.2%	10.7%	11.8%	10.1%	12.7%	10.2%	9.8%	9.8%	9.6%	10.2%	10.0%
NSW Cov	MM reading	10	12	10	11	11	10	14	16	13	13	12	12	10	9	9	9	10	9
NSW Cov	Top screw	10.5	12	11	11	11	10	13	16	13	13	11.5	12.5	10	8.5	9	9	10	10
NSW Cov	Btm screw	10	11	10.5	10.5	10.5	9	14	16	13	12	12	13	9	9.5	8.5	8.5	10	9.5
NSW Cov	Mass	606	618	617	616	596	636	771	786	774	848	817	793	440	398	390	413	427	356
Vic Ext	MM reading	10	12	11	11	11	10	13	15	13	14	12	12	10	9	9	9	10	10
Vic Ext	Top screw	11	11.5	10.5	11	11	9.5	14	16.5	14	14	12	13	10.5	8.5	9	9.5	10	10
Vic Ext	Btm screw	10	10.5	10	10.5	11	9.5	13.5	16	14.5	13	12.5	13	10.5	9	9	9	9.5	9.5
Vic Ext	Mass	610	600	638	608	605	630	768	788	807	859	802	799	440	403	397	416	427	359
Vic Cov	MM reading	11	12	11	11	11	10	14	15	14	13	12	12	10	9	10	9	10	9
Vic Cov	Top screw	11	11.5	11	10.5	11	10.5	12	15.5	14.5	13	13	12.5	10	9	9	9	9	9
Vic Cov	Btm screw	10	10.5	10.5	10.5	10.5	9.5	13	16	16	13	12.5	12.5	10	9	9	8.5	8.5	8.5
Vic Cov	Mass	628	604	641	616	611	638	764	787	832	856	816	793	422	410	385	398	413	350

Average	10	12	11	11	11	10	13	16	13	13	12	13	10	9	9	9	9	9
Max	11	12	11	11	11	11	15	16.5	16	14	13	14	11	9.5	10	9.5	10	10
Min	10	11	10	10	11	9	12	15	12	12	12	12	9	9	9	9	8	8
Spread	1	2	2	1	1	2	3	2	4	3	2	2	2	1	2	1	2	2

Ave Mass	614	619	615	612	605	627	778	796	796	852	697	793	459	405	394	418	422	353
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**Comparison of Meter Readings to Oven Dry Moisture Content**

	Blackbutt						Spotted Gum						Radiata					
	Coated			Uncoated			Coated			Uncoated			Uncoated			Coated		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Oven dry	11%	11%	10%	11%	11%	10%	11%	12%	11%	12%	10%	13%	10%	10%	10%	10%	10%	10%
Meter	10%	12%	10%	11%	11%	10%	14%	16%	13%	13%	12%	12%	10%	9%	9%	9%	9%	9%
Meter correction	1%	-1%	0%	0%	0%	0%	-3%	-4%	-2%	-1%	-2%	1%	0%	1%	1%	1%	0%	1%
	-0.2%						-1.8%						0.6%					

Appendix 2

TABLE 2a - VICTORIA COVERED TEST BOARDS

UNCORRECTED MM reading				BLACKBUTT												SPOTTED GUM												RADIATA PINE											
				Coated						Uncoated						Coated						Uncoated						Coated						Uncoated					
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18																		
Sample Board mass	628		604		641		616		611		638		764		787		832		856		816		793		422		410		385		398		413		350				
Sample Board MC	10.7%		10.5%		9.9%		10.6%		10.7%		10.5%		11.4%		12.2%		10.7%		11.8%		10.1%		12.7%		10.2%		9.8%		9.8%		9.6%		10.2%		10.0%				
Sample Board OD mass	567		547		583		557		552		577		686		701		752		765		741		704		383		373		351		363		375		318				
Correction to OD	1		-1		0		0		0		0		-3		-4		-2		-1		-2		-1		0		1		1		1		0		1				
Date	TFBD	FFDI	Top/Bottom	MM (%)	Mass (g)	MM (%)	Mass (g)	MM (%)	Mass (g)	MM (%)	Mass (g)	MM (%)	Mass (g)	MM (%)	Mass (g)	MM (%)	Mass (g)	MM (%)	Mass (g)	MM (%)	Mass (g)	MM (%)	Mass (g)	MM (%)	Mass (g)	MM (%)	Mass (g)	MM (%)	Mass (g)	MM (%)	Mass (g)	MM (%)	Mass (g)	MM (%)	Mass (g)				
8-Dec	NO		Top	10		10.5		10		10		10		9.5		10		12		11		11		11		9		8		8.5		8.5		8.5		8.5		8	
			Bottom	9.5		10		9.5		9.5		10		9		11		12		12.5		11		10		9		8.5		8.5		8		8.5		8.5		8	
10-Dec	YES	53	Top	9		9.5		9		8.5		9		8.5		9		11		9.5		10.5		10		<6		<6		<6		<6		<6		<6		<6	
			Bottom	9		9		8.5		9		9		8		11		12		10		10		9.5		<6		<6		<6		<6		<6		<6		<6	
11-Dec	NO	27	Top	10		10.5		11		10.5		10		10		9.5		12		11.5		10		11		7.5		7		7.5		10		9.5		8.5		8.5	
			Bottom	8.5		9		9		8.5		9		8		9.5		11		11		10		9		<6		<6		<6		<6		<6		<6		<6	
14-Dec	YES	54	Top	9		9.5		9.5		9		9		9		9		11		9.5		10		8.5		<6		<6		<6		6.5		6		6.5		6.5	
			Bottom	8.5		9		8.5		8.5		9		8		10		11		11		10		9		6		6.5		6.5		<6		<6		<6		<6	
15-Dec	NO	30	Top	9		9.5		9.5		9		9		9		8.5		10.5		9.5		10		8.5		6.5		6		6.5		6.5		6.5		6.5		6.5	
			Bottom	8.5		9		8.5		9		9		8		10		11		11		10		9		<6		<6		<6		<6		<6		<6		<6	
21-Dec	YES	52	Top	9.5		9.5		9.5		9		9		9		9		11		10		10		8.5		7		6.5		6.5		6.5		6.5		6.5		6.5	
			Bottom	9		9.5		9		9		9.5		8.5		10.5		11.5		11.5		10		9.5		<6		6.5		7		6		6.5		6		6	
22-Dec	NO	24	Top	9		9		9		9		9		9		8.5		10		9		9.5		8.5		8		7.5		7.5		7.5		7.5		7.5		7.5	
			Bottom	9		9		9		9		9		8.5		9.5		10.5		9.5		9.5		8		8		8		8		8		8		8		8.5	
23-Dec	NO	18	Top	8.5	618	9	592	9	631	8.5	607	8.5	599	8.5	629	8	754	10	772	9	816	9.5	842	8	802	9.5	780	7	412	6.5	402	7	377	7.5	392	7	406	7	344
			Bottom	8.5	9%	9	8%	8.5	8%	9	9%	9	9%	8	9%	9.5	10%	10	10%	10	9%	9.5	10%	8.5	8%	9.5	11%	7	8%	7	8%	7	8%	7	8%	7	8%	7	8%
29-Dec	NO	?	Top	9	617	9.5	593	9	632	9	608	9	601	8.5	628	8.5	750	10.5	772	9.5	815	9.5	838	8.5	799	9.5	780	7.5	413	7	401	7.5	377	7.5	389	7	404	7	343
			Bottom	9	9%	9	9%	9	8%	9	9%	9	9%	8	9%	9.5	9%	11	10%	10.5	8%	10	9%	9	8%	9.5		7.5	8%	7	7%	7.5	8%	7	7%	7	8%	7	8%
5-Jan	YES	41	Top	10		11		11		10		10.5		10		9		11		10		10		10.5		9		8.5		9		8.5		8.5		8		8	
			Bottom	9.5		9.5		9.5		9.5		9.5		9		10		10		11		10		10		9		8.5		8.5		8.5		8.5		8		8	
10-Jan			Top	9.5	619	10.5	593	10	629	9.5	607	10	601	9.5	628	9	748	11	772	9.5	816	10	838	9.5	802	10	778	7.5	409	7	398	7.5	373	7.5	388	7	401	7	338
			Bottom	9.5	9%	9.5	9%	9	8%	9.5	9%	9.5	9%	8.5	9%	10	9%	11	10%	11	9%	10	9%	9.5	8%	10	11%	7.5	7%	7	7%	7.5	6%	6.5	7%	7	7%	6.5	6%
11-Jan			Top	9	617	10	592	9.5	629	9	605	9.5	598	9	625	8.5	748	10	770	9	812	9.5	837	8.5	797	9.5	772	6.5	401	<6	394	6.5	372	6	383	<6	395	<6	337
			Bottom	9	9%	9	8%	8.5	8%	9	9%	9	8%	8	8%	10	9%	11	10%	10	8%	9.5	9%	9	8%	9.5	10%	6.5	5%	6	6%	6.5	6%	6	5%	<6	5%	<6	6%
16-Jan			Top	9.5	616	10	591	9.5	629	9.5	605	9.5	598	9	625	9	747	10.5	768	9.5	812	10	837	8.5	798	9.5	777	7	405	6.5	396	7	373	7	387	6.5	399	7	338
			Bottom	9	9%	9.5	8%	9	8%	9.5	9%	9.5	8%	8.5	8%	10	9%	11	9%	10.5	8%	10	9%	9.5	8%	9.5	10%	7	6%	6.5	6%	7	6%	6.5	7%	7	6%	6.5	6%
19-Jan			Top	13.5	627	15	604	14	641	15	621	15	613	14	643	12	759	14	774	13	816	13	844	16.5	811	12	782	12	426	11	415	11.5	391	12	403	11.5	418	11	356
			Bottom	11	10%	11.5	11%	11	10%	11	12%	11	11%	11.5	11%	11	11%	12	10%	11	9%	11	10%	11	9%	11	10%	10.5	11%	11	11%	11	12%	11	11%	11	12%	11.5	12%
26-Jan	NO	24	Top	10	624	11.5	599	11	636	10.5	612	11	606	10	633	9	753	11	770	9.5	814	10	841	10.5	804	10	781	8.5	414	7.5	401	8.5	380	8.5	391	8	407	8	345
			Bottom	9.5	10%	10	10%	9.5	9%	9.5	10%	10	10%	9	10%	10	10%	11	10%	10	8%	10	10%	9.5	9%	10	11%	8.5	8%	8	7%	8	8%	7.5	8%	8	9%	7.5	8%
2-Feb	NO	24	Top	9.5	621	11	595	10	632	10	609	10	601	9.5	629	8.5	749	10	768	9	811	9.5	837	9.5	801	10	778	7.5	411	7	401	7.5	377	7.5	390	7	404	7	342
			Bottom	9.5	9%	9.5	9%	9.5	8%	9.5	9%	9.5	9%	8.5	9%	9.5	9%	10.5	9%	10	8%	9.5	9%	9.5	8%	9.5	11%	7.5	7%	7.5	7%	7	8%	7	7%	7.5	8%	7.5	7%
6-Feb	NO	39	Top	8.5	618	9	593	8.5	629	8.5	606	8.5	599	8	626	7.5	745	8.5	765	7.5	809	8.5	835	8	799	9	776	7	410	6.5	400	7	376	6.5	388	6	402	6.5	341
			Bottom	8.5	9%	8.5	9%	8.5	8%	8.5	9%	8.5	9%	8	8%	8.5	9%	9	9%	8.5	8%	8.5	9%	8	8%	9	10%	7	7%	7	7%	7	7%	7	7%	7	7%	7.5	7%
10-Feb	NO	24	Top	9	619	9.5	595	9	632	9	608	9	601	8.5	628	7.5	747	9	766	8	809	9	836	8.5	799	9	776	7.5	413	7.5	404	7.5	379	7.5	393	7.5	407	7.5	345
			Bottom	9	9%	9	9%	9	8%	9	9%	9	9%	8.5	9%	9	9%	9.5	9%	9	8%	9	9%	8.5	8%	9.5	10%	7.5	8%	7.5	8%	7.5	8%	7.5	8%				

Appendix 2

Table 2b - VICTORIA EXPOSED TEST BOARDS

UNCORRECTED MM reading and		BLACKBUTT												SPOTTED GUM												RADIATA PINE											
		Coated						Uncoated						Coated						Uncoated						Coated						Uncoated					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18																		
		MM (%)	Mass (g)	MM (%)	Mass (g)	MM (%)	Mass (g)	MM (%)	Mass (g)	MM (%)	Mass (g)	MM (%)	Mass (g)	MM (%)	Mass (g)	MM (%)	Mass (g)	MM (%)	Mass (g)																		
Sample Board mass	610	600	638	608	605	630	768	788	807	859	802	799	440	403	397	416	427	359																			
Sample Board MC	10.7%	10.5%	9.9%	10.6%	10.7%	10.5%	11.4%	12.2%	10.7%	11.8%	10.1%	12.7%	10.2%	9.8%	9.8%	9.6%	10.2%	10.0%																			
Sample Board OD mass	551	543	580	550	547	570	689	702	729	768	728	709	399	367	361	380	387	326																			
Correction to OD	1	-1	0	0	0	0	-3	-4	-2	-1	-2	1	0	1	1	1	1	1																			
Date	TFBD	FFDI	Top/Bottom	MM (%)	Mass (g)	MM (%)	Mass (g)	MM (%)	Mass (g)	MM (%)	Mass (g)	MM (%)	Mass (g)	MM (%)	Mass (g)	MM (%)	Mass (g)	MM (%)	Mass (g)																		
8-Dec	NO		Top	10	10	9.5	10	10	10	9	9	11	12	11	12	10	11	9.5	8																		
			Bottom	9.5	10	9.5	10	10	10	9	9	10.5	12	12	11	11	10	9.5	8																		
10-Dec	YES	53	Top	9	9.5	9.5	9	9	9	7.5	7.5	10.5	13	11	11	8.5	10.5	<6	<6																		
			Bottom	8	8.5	8.5	9.5	9	9	8	8	10.5	12	9.5	9.5	9.5	10.5	<6	<6																		
11-Dec	NO	27	Top	11.5	13	12.5	11	11	11	9.5	9.5	11	13	11	11	11.5	12	16	17.5																		
			Bottom	8.5	9	8.5	9.5	9	9	8	8	10.5	11.5	10	9.5	9.5	10.5	12	21.5																		
14-Dec	YES	54	Top	9.5	10	9.5	9	9	9	7.5	7.5	10	11	9.5	9	9	10	7.5	8																		
			Bottom	8.5	8.5	8.5	9	9	9	8	8	10	11.5	10	10.5	9	10	8.5	8																		
15-Dec	NO	30	Top	11	12	12	10.5	11	9	9	9	11	13	11	11.5	10.5	11.5	9	8.5																		
			Bottom	9	9	9	9.5	9.5	8.5	8.5	8.5	10.5	12	10	9.5	9.5	11	8	8.5																		
21-Dec	YES	52	Top	9.5	10.5	9.5	10.5	9.5	8.5	8.5	8.5	12	13	12	11	9.5	11	7.5	6.5																		
			Bottom	9.5	10	9.5	10	10	9	9	9	12.5	13.5	11.5	10.5	11	11.5	7.5	7																		
22-Dec	NO	24	Top	10.5	11.5	12.5	10.5	10.5	9.5	9.5	9.5	10	13	9.5	10.5	10	11	8.5	8																		
			Bottom	8.5	9	8.5	9	9	8.5	8.5	8.5	10	11	9.5	9.5	9	10	7.5	8																		
23-Dec	NO	18	Top	11	596	12	587	11.5	624	10.5	595	10	590	8.5	617	10.5	750	12.5	769																		
			Bottom	8.5	8%	9	8%	8.5	8%	9.5	8%	9	8%	8	8%	10	9%	11	9%																		
29-Dec	NO	?	Top	10	597	11	587	10	624	10	595	9.5	590	8	616	10.5	749	11.5	768																		
			Bottom	9	8%	9	8%	9	8%	9.5	8%	8.5	8%	8.5	8%	9.5	9%	9.5	7%																		
5-Jan	YES	41	Top	10	11.5	10	10	10	10	8.5	8.5	10	11	9.5	10	10	10	10	8.5																		
			Bottom	9	9.5	9.5	9.5	9.5	9.5	8.5	8.5	10	11	9.5	9.5	10	10	11	10																		
10-Jan			Top	10	596	12	586	10	623	10.5	594	10	589	8	615	11	747	11	763																		
			Bottom	9	8%	10	8%	9.5	7%	10	8%	10	8%	8.5	8%	11	8%	12	9%																		
11-Jan			Top	9.5	592	11	584	9	620	10	591	9.5	586	8	613	10	745	10.5	762																		
			Bottom	8.5	7%	9.5	8%	9	7%	10	8%	9.5	7%	8.5	8%	10.5	8%	12	9%																		
16-Jan			Top	9	592	10	582	9	619	9.5	590	9	585	7.5	611	10	742	10	761																		
			Bottom	9	7%	9.5	7%	9	7%	10	7%	9.5	7%	8.5	7%	11	8%	12	8%																		
19-Jan			Top	16	612	18	606	16	640	14.5	613	15	606	15	633	11.5	758	14	769																		
			Bottom	11.5	11%	13	12%	12	10%	12	12%	12	11%	12	11%	11	10%	12	9%																		
26-Jan	NO	24	Top	10.5	601	12	590	10	627	10	598	10	594	8.5	619	9.5	749	10.5	765																		
			Bottom	9.5	9%	10	9%	9.5	8%	10	9%	10	9%	9.5	9%	10	9%	11.5	9%																		
2-Feb	NO	24	Top	10	596	11	587	9.5	623	10	594	9.5	589	8.5	615	10	743	10.5	760																		
			Bottom	9.5	8%	10	8%	9.5	7%	10	8%	10	8%	9.5	8%	10.5	8%	12	8%																		
6-Feb	NO	39	Top	8	594	8.5	584	7.5	621	8	593	8	586	7.5	614	7	742	7.5	757																		
			Bottom	8.5	8%	8	8%	8	7%	8.5	8%	8.5	7%	8	8%	8	7.5	8	8.5																		
10-Feb	NO	24	Top	8.5	594	9.5	585	8.5	620	9	592	8.5	585	7.5	614	8	740	8.5	758																		
			Bottom	9	8%	9	8%	8.5	7%	9.5	8%	9	7%	8.5	8%	8.5	6%	8.5	8%																		
16-Feb	NO	27	Top	9.5	591	10.5	582	9	617	9.5	589	9	584	8	610	9.5	737	10	754																		
			Bottom	9	7%	9	7%	9	6%	9.5	7%	9.5	7%	8.5	7%	9.5	7%	10.5	7%																		
18-Feb	YES	56	Top	8.5	589	9.5	579	8	616	8.5	587	8	582	7	607	8.5	737	8.5	753																		
			Bottom	8.5	7%	8.5	7%	8.5	6%	9.5	7%	9	6%	8	6%	9	7%	9.5	7%																		
19-Feb	NO	20	Top	11	592	13	584	11	619	10	591	10.5	585	9	613	10	739	12.5	754																		
			Bottom	8.5	7%	9	8%	8.5	7%	9.5	8%	9.5	7%	8.5	8%	9	7%	10	7%																		
23-Feb	NO	25	Top	9.5	594	11	585	9.5	619	9.5	593	9	586	7.5	613	8.5	739	9.5	755																		
			Bottom	8.5	8%	9	8%	8.5	7%	9	8%	9	7%	8.5	8%	9	7%	10	8%																		

Appendix 3 Table 3a

### Bushfire Moisture Content results sheet

**Covered**

Location - Annangrove NSW

Brd. No.	Board Spec.	Date Time	20/12/2006 4:00PM		28/12/2006 4:10PM		3/01/2007 5:00PM		12/01/2007 4:20PM		17/01/2007 4:45PM		25/01/2007 4:00PM		1/02/2007 4:10PM		8/02/2007 4:00PM		16/02/2007 4:00PM	
			MC	MC-Cor	MC	MC-Cor	MC	MC-Cor	MC	MC-Cor	MC	MC-Cor	MC	MC-Cor	MC	MC-Cor	MC	MC-Cor	MC	MC-Cor
UNCORRECTED MC READINGS																				
1	BBT	Top	10	11	10	11	11	12	11	12	11	12	11	12	11	12	11	12	11	12
	coated	Btm	9	10	10	11	10	11	10	11	10	11	11	12	10	11	10	11	11	12
2	BBT	Top	11	10	11	10	12	11	12	11	12	11	12	11	10	11	12	11	12	11
	coated	Btm	10	9	11	10	11	10	11	10	11	10	12	11	11	10	11	10	12	11
3	BBT	Top	10	10	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
	coated	Btm	10	10	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
4	BBT	Top	10	10	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
	uncoated	Btm	10	10	10	10	10	10	10	10	10	10	11	11	11	11	11	11	11	11
5	BBT	Top	10	10	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
	uncoated	Btm	10	10	10	10	10	10	10	10	10	10	11	11	10	10	10	10	11	11
6	BBT	Top	10	10	10	10	10	10	10	10	10	10	11	11	10	10	10	10	10	10
	uncoated	Btm	9	9	9	9	10	10	9	9	9	9	11	11	10	10	10	10	10	10
7	SG	Top	10	7	11	8	11	8	11	8	11	8	11	8	10	7	10	7	11	8
	coated	Btm	11	8	12	9	11	8	12	9	12	9	11	8	11	8	11	8	12	9
8	SG	Top	12	8	12	8	12	8	13	9	13	9	12	8	12	8	12	8	12	8
	coated	Btm	12	8	13	9	12	8	13	9	13	9	12	8	12	8	12	8	13	9
9	SG	Top	11	9	11	9	11	9	11	9	11	9	11	9	10	8	10	8	11	9
	coated	Btm	11	9	12	10	13	11	12	10	12	10	13	11	12	10	12	10	13	11
10	SG	Top	11	10	11	10	12	11	12	11	12	11	12	11	11	10	11	10	12	11
	uncoated	Btm	11	10	11	10	11	10	11	10	11	10	11	10	11	10	11	10	12	11
11	SG	Top	10	8	11	9	12	10	11	9	11	9	13	11	11	9	11	9	12	10
	uncoated	Btm	11	9	11	9	11	9	12	10	12	10	11	9	11	9	11	9	12	10
12	SG	Top	11	12	11	12	11	12	11	12	11	12	12	13	11	12	11	12	12	13
	uncoated	Btm	11	12	12	13	12	13	12	13	12	13	12	13	12	13	12	13	12	13
13	RAD	Top	10	10	9	9	11	11	9	9	10	10	12	12	11	11	10	10	11	11
	uncoated	Btm	9	9	9	9	10	10	8	8	9	9	12	12	10	10	10	10	11	11
14	RAD	Top	9	10	8	9	10	11	8	9	9	10	11	12	10	11	10	11	10	11
	uncoated	Btm	9	10	9	10	11	12	8	9	9	10	12	13	11	12	11	12	11	12
15	RAD	Top	9	10	9	10	10	11	8	9	9	10	12	13	10	11	10	11	11	12
	uncoated	Btm	9	10	9	10	10	11	8	9	9	10	12	13	10	11	10	11	11	12
16	RAD	Top	9	10	9	10	10	11	8	9	9	10	12	13	10	11	10	11	11	12
	coated	Btm	9	10	8	9	10	11	8	9	9	10	12	13	10	11	10	11	11	12
17	RAD	Top	9	9	9	9	10	10	8	8	9	9	11	11	10	10	10	10	11	11
	coated	Btm	10	10	9	9	11	11	9	9	10	10	12	12	11	11	11	11	11	11
18	RAD	Top	10	11	9	10	11	12	9	10	10	11	12	13	11	12	11	12	11	12
	coated	Btm	9	10	9	10	11	12	9	10	9	10	12	13	11	12	11	12	11	12

Appendix 3 Table 3b

### Bushfire Moisture Content results sheet

**Exposed**

Location - Annangrove NSW

Brd. No.	Board Spec.	Date Time	20/12/2006 4:00PM		28/12/2006 4:10PM		3/01/2007 5:00Pm		12/01/2007 4:20PM		17/01/2007 4:45PM		25/01/2007 4:00PM		1/02/2007 4:10PM		8/02/2007 4:00PM		16/02/2007 4:00PM	
			MC	MC -Cor	MC	MC -Cor	MC	MC -Cor	MC	MC -Cor	MC	MC -Cor	MC	MC -Cor	MC	MC -Cor	MC	MC -Cor	MC	MC -Cor
UNCORRECTED MC READINGS																				
1	BBT coated	Top	10	11	11	12	13	14	10	11	10	11	14	15	13	14	12	13	12	13
		Btm	10	11	11	12	11	12	10	11	10	11	11	12	10	11	10	11	11	12
2	BBT coated	Top	11	10	12	11	17	16	9	8	10	9	18	17	16	15	15	14	13	12
		Btm	11	10	11	10	12	11	10	9	10	9	12	11	11	10	11	10	12	11
3	BBT coated	Top	10	10	11	11	16	16	9	9	9	9	17	17	15	15	14	14	12	12
		Btm	9	9	9	9	11	11	9	9	9	9	11	11	10	10	10	10	10	10
4	BBT uncoated	Top	10	10	11	11	13	13	9	9	9	9	15	15	13	13	12	12	11	11
		Btm	10	10	10	10	10	10	9	9	9	9	12	12	10	10	10	10	10	10
5	BBT uncoated	Top	11	11	11	11	14	14	10	10	10	10	15	15	13	13	12	12	12	12
		Btm	10	10	10	10	11	11	10	10	10	10	11	11	10	10	10	10	10	10
6	BBT uncoated	Top	10	10	9	9	11	11	9	9	9	9	13	13	12	12	11	11	11	11
		Btm	9	9	9	9	9	9	8	8	8	8	11	11	9	9	9	9	9	9
7	SG coated	Top	11	8	12	9	13	10	10	7	10	7	12	9	10	7	11	8	10	7
		Btm	11	8	12	9	11	8	11	8	10	7	10	7	9	6	9	6	10	7
8	SG coated	Top	12	8	13	9	13	9	11	7	11	7	12	8	11	7	11	7	11	7
		Btm	12	8	14	10	13	9	13	9	12	8	12	8	11	7	11	7	11	7
9	SG coated	Top	11	9	11	9	12	10	9	7	9	7	11	9	11	9	11	9	10	8
		Btm	12	10	11	9	12	10	10	8	10	8	12	10	10	8	10	8	11	9
10	SG uncoated	Top	11	10	11	10	11	10	10	9	9	8	12	11	11	10	10	9	10	9
		Btm	11	10	11	10	11	10	11	10	10	9	11	10	10	9	10	9	10	9
11	SG uncoated	Top	11	9	11	9	12	10	9	7	9	7	13	11	10	8	11	9	10	8
		Btm	11	9	12	10	12	10	11	9	11	9	11	9	10	8	10	8	11	9
12	SG uncoated	Top	11	12	11	12	12	13	10	11	10	11	12	13	11	12	10	11	10	11
		Btm	12	13	12	13	12	13	12	13	11	12	12	13	11	12	11	12	11	12
13	RAD uncoated	Top	9	9	9	9	21	21	7	7	7	7	27	27	16	16	13	13	9	9
		Btm	9	9	12	12	26	26	8	8	8	8	20	20	11	11	13	13	13	13
14	RAD uncoated	Top	9	10	9	10	19	20	6	7	7	8	28	29	14	15	13	14	10	11
		Btm	9	10	10	11	25	26	7	8	8	9	30	31	11	12	13	14	11	12
15	RAD uncoated	Top	9	10	9	10	22	23	7	8	8	9	29	30	15	16	15	16	11	12
		Btm	9	10	11	12	26	27	8	9	9	10	26	27	11	12	15	16	13	14
16	RAD coated	Top	9	10	8	9	17	18	6	7	7	8	29	30	14	15	12	13	10	11
		Btm	9	10	9	10	23	24	7	8	8	9	28	29	13	14	14	15	13	14
17	RAD coated	Top	9	9	8	8	17	17	6	6	7	7	27	27	15	15	13	13	10	10
		Btm	9	9	9	9	22	22	7	7	8	8	30	30	14	14	15	15	12	12
18	RAD coated	Top	8	9	8	9	17	18	6	7	7	8	27	28	15	16	12	13	10	11
		Btm	9	10	9	10	16	17	7	8	8	9	27	28	12	13	13	14	12	13

Appendix 3 Table 3c

### Bushfire Moisture Content results sheet

**Covered**

Location - The Gap QLD

Brd. No.	Board Spec.	Date Time	11/12/2006 6.15PM		21/12/2006 2:30PM		17/01/2007 5:30PM		21/01/2007 3:00PM		29/01/2007 5:00PM		4/02/2007 3:00PM		11/02/2007 3:00PM		20/02/2007 4:30PM		25/02/2007 3:00PM		20/03/2007 5:30PM	
			MC	MC-Cor	MC	MC-Cor	MC	MC-Cor	MC	MC-Cor	MC	MC-Cor	MC	MC-Cor	MC	MC-Cor	MC	MC-Cor	MC	MC-Cor	MC	MC-Cor
1	BBT coated	Top	10	11	10	11	10	11	10	11	11	12	11	12	11	12	11	12	11	12	10	11
		Btm	9	10	10	11	10	11	10	11	10	11	10	11	10	11	11	12	11	12	10	11
2	BBT coated	Top	11	10	12	11	12	11	12	11	12	11	12	11	12	11	12	11	12	11	11	10
		Btm	10	9	11	10	11	10	11	10	11	10	11	10	11	10	11	10	11	10	10	9
3	BBT coated	Top	10	10	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
		Btm	9	9	9	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	9
4	BBT uncoated	Top	10	10	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	10	10
		Btm	9	9	10	10	10	10	10	10	10	10	10	10	10	9	9	10	10	10	10	10
5	BBT uncoated	Top	10	10	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
		Btm	9	9	10	10	10	10	10	10	10	10	10	10	10	10	10	11	11	10	10	10
6	BBT uncoated	Top	9	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	11	11	10
		Btm	9	9	9	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9
7	SG coated	Top	11	8	12	9	12	9	11	8	12	9	12	9	11	8	11	8	12	9	11	8
		Btm	11	8	12	9	12	9	11	8	12	9	12	9	11	8	11	8	12	9	11	8
8	SG coated	Top	12	8	13	9	13	9	12	8	13	9	13	9	12	8	12	8	13	9	12	8
		Btm	11	7	12	8	12	8	12	8	12	8	12	8	12	8	12	8	13	9	11	7
9	SG coated	Top	11	9	12	10	11	9	12	10	12	10	12	10	11	9	11	9	12	10	11	9
		Btm	11	9	12	10	12	10	12	10	12	10	12	10	12	10	12	10	12	10	11	9
10	SG uncoated	Top	10	9	12	11	11	10	11	10	12	11	12	11	11	10	12	11	12	11	11	10
		Btm	10	9	10	9	10	9	10	9	10	9	11	10	10	9	11	10	11	10	10	9
11	SG uncoated	Top	11	9	12	10	12	10	12	10	12	10	13	11	12	10	12	10	13	11	12	10
		Btm	10	8	11	9	11	9	12	10	12	10	12	10	11	9	11	9	12	10	11	9
12	SG uncoated	Top	12	13	13	14	12	13	12	13	13	14	13	14	12	13	13	14	13	14	12	13
		Btm	11	12	12	13	12	13	12	13	12	13	12	13	12	13	12	13	12	13	11	12
13	RAD uncoated	Top	9	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	11	11	9	9
		Btm	9	9	10	10	10	10	10	10	9	9	10	10	10	10	10	10	10	10	10	10
14	RAD uncoated	Top	8	9	8	9	10	11	10	11	9	10	10	11	10	11	10	11	10	11	9	10
		Btm	8	9	8	9	10	11	9	10	9	10	9	10	10	11	10	11	10	11	9	10
15	RAD uncoated	Top	8	9	8	9	9	10	9	10	9	10	9	10	10	11	10	11	10	11	9	10
		Btm	8	9	8	9	9	10	9	10	9	10	9	10	10	11	10	11	10	11	9	10
16	RAD coated	Top	8	9	9	10	9	10	10	11	9	10	10	11	10	11	10	11	10	11	9	10
		Btm	8	9	8	9	9	10	9	10	9	10	9	10	10	11	10	11	10	11	9	10
17	RAD coated	Top	8	8	8	8	9	9	9	9	9	9	9	9	9	9	10	10	10	10	8	8
		Btm	8	8	8	8	9	9	9	9	9	9	9	9	9	9	10	10	10	10	9	9
18	RAD coated	Top	9	10	9	10	9	10	9	10	9	10	9	10	9	11	10	11	10	11	9	10
		Btm	8	9	8	9	9	10	9	10	9	10	9	10	10	11	10	11	10	11	9	10

Appendix 3 Table 3d

## Bushfire Moisture Content results sheet

**Exposed**

**Location - The Gap QLD**

Brd. No.	Board Spec.	Date Time	11/12/2006		21/12/2006		17/01/2007		21/01/2007		29/01/2007		4/02/2007		11/02/2007		20/02/2007		25/02/2007		20/03/2007	
			6:15PM		2:30PM		5:30PM		3:00PM		5:00PM		3:00PM		3:00PM		4:30PM		3:00PM		5:30PM	
UNCORRECTED MC READINGS			MC	MC -Cor	MC	MC -Cor	MC	MC -Cor	MC	MC -Cor	MC	MC -Cor	MC	MC -Cor	MC	MC -Cor	MC	MC -Cor	MC	MC -Cor	MC	MC -Cor
1	BBT coated	Top	10	11	11	12	11	12	11	12	11	12	11	12	11	12	12	13	11	12	10	11
		Btm	10	11	10	11	11	12	10	11	10	11	11	12	10	11	11	12	11	12	10	11
2	BBT coated	Top	11	10	12	11	13	12	13	12	13	12	13	12	13	12	14	13	13	12	10	9
		Btm	10	9	11	10	11	10	11	10	11	10	11	10	11	10	11	10	11	10	10	9
3	BBT coated	Top	10	10	11	11	12	12	12	12	12	12	12	13	13	13	13	13	13	13	11	11
		Btm	9	9	10	10	10	10	10	10	10	10	10	10	10	10	11	11	11	11	9	9
4	BBT uncoated	Top	10	10	11	11	11	11	11	11	11	11	11	11	12	12	12	12	12	12	10	10
		Btm	10	10	10	10	11	11	10	10	11	11	11	11	11	11	12	12	12	12	10	10
5	BBT uncoated	Top	10	10	11	11	11	11	11	11	11	11	12	12	12	12	12	12	12	12	10	10
		Btm	10	10	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	10	10
6	BBT uncoated	Top	9	9	9	9	10	10	10	10	10	10	10	10	11	11	11	11	10	10	9	9
		Btm	9	9	10	10	11	11	11	11	10	10	10	10	12	12	14	14	12	12	10	10
7	SG coated	Top	11	8	11	8	12	9	12	9	10	7	11	8	13	10	12	9	12	9	9	6
		Btm	11	8	12	9	13	9	12	9	12	9	12	9	12	9	12	9	12	9	10	7
8	SG coated	Top	12	8	13	9	13	9	13	9	12	8	12	8	13	9	13	9	12	8	9	5
		Btm	13	9	13	9	13	9	12	8	12	8	12	8	12	8	12	8	12	8	11	7
9	SG coated	Top	10	8	11	9	11	9	11	9	9	7	10	8	12	10	11	9	13	11	8	6
		Btm	11	9	12	10	12	10	11	9	11	9	11	9	12	10	12	10	12	10	10	8
10	SG uncoated	Top	11	10	11	10	11	10	11	10	11	10	11	10	12	11	11	10	12	11	8	7
		Btm	11	10	11	10	11	10	11	10	11	10	10	9	11	10	10	9	11	10	9	8
11	SG uncoated	Top	11	9	11	9	12	10	11	9	11	9	11	9	11	9	11	9	12	10	9	7
		Btm	10	8	11	9	12	10	11	9	11	9	11	9	10	8	11	9	11	9	10	8
12	SG uncoated	Top	12	13	12	13	12	13	12	13	12	13	12	13	12	13	13	14	12	13	10	11
		Btm	11	12	12	13	12	13	11	12	12	13	12	13	12	13	12	13	12	13	10	11
13	RAD uncoated	Top	10	10	11	11	12	12	12	12	11	11	12	12	21	21	17	17	17	17	8	8
		Btm	9	9	11	11	11	11	11	11	11	11	11	11	15	15	16	16	15	15	9	9
14	RAD uncoated	Top	8	9	9	10	9	10	9	10	9	10	10	11	24	25	15	16	18	19	7	8
		Btm	8	9	9	10	10	11	10	11	10	11	10	11	21	22	18	19	16	17	8	9
15	RAD uncoated	Top	8	9	9	10	9	10	10	11	9	10	10	11	20	21	14	15	11	12	8	9
		Btm	8	9	8	9	11	12	11	12	10	11	11	12	18	19	16	17	12	13	8	9
16	RAD coated	Top	8	9	9	10	10	11	10	11	9	10	10	11	16	17	15	16	11	12	8	9
		Btm	8	9	8	9	10	11	10	11	9	10	10	11	18	19	17	18	12	13	8	9
17	RAD coated	Top	8	8	8	8	10	10	10	10	9	9	10	10	13	13	13	13	11	11	8	8
		Btm	8	8	8	8	10	10	10	10	9	9	10	10	13	13	16	16	12	12	9	9
18	RAD coated	Top	8	9	9	10	9	10	9	10	8	9	8	9	24	25	11	12	9	10	8	9
		Btm	8	9	8	9	10	11	10	11	9	10	10	11	25	26	14	15	11	12	8	9