MISSISSIPPI STATE UNIVERSITY

FOREST AND WILDLIFE RESEARCH CENTER

DEPARTMENT OF SUSTAINABLE BIOPRODUCTS

Fourth Annual Evaluation of Phase II MSU/RTA Alternative Preservative Study

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Fourth Annual Evaluation of Phase II MSU/RTA Alternative Preservative Study

This report covers the 4th annual evaluation of the full length crossties exposed as part of the MSU/RTA Phase II alternative preservative study. A visual evaluation of the exposed top surface was conducted for all ties at both exposure sites. Random ties from various treatment groups, at both sites, were selected to be examined on all four surfaces and one tie from each treatment group was selected for cross cutting and internal evaluation.

General Observations:

No unexpected results were found. As noted in previous reports Site 2 ties appeared to be a drier probably due to more direct sunlight exposure allowing for more checking. Ties at Site 1 appeared to be more moist/wet due to the increased shade and leaf litter at this site and thus more sign of incipient decay were noted at this site.

General photographs documenting the condition of the sites and some of the noted deterioration can be seen below (Figures 1 - 2). The tie number denotes the position of exposure as recorded on the plot-maps and inspection forms.

Copies of the inspection forms along with photographs of the segmented ties can be found in the appendix.

Figure 1 - Site 2 at the time of inspection.

Figure 2 - Site 1 at the time of inspection.

APPENDIX:

Site 1 – Dorman Lake Test Site

Figure 1 - Tie #1 white oak/borate/creosote 6# (Koppers).

Figure 2 - Tie #1 white oak/borate/creosote 6# (Koppers).

Figure 3 - Tie #11 red oak/borate/creosote 7lbs (Koppers).

Figure 4 - Tie #11 red oak/borate/creosote 7lbs (Koppers).

Figure 5 – Tie #21 untreated red oak with decay and termite damage.

Figure 6 – Tie #21 untreated red oak with decay in multiple places.

Figure 7 - Tie #31 red oak/creosote 7lbs (Koppers).

Figure 8 - Tie #31 red oak/creosote 7lbs (Koppers).

Figure 9 - Tie #41 white oak/borate/creosote 7lbs (Koppers).

Figure 10 - Tie #41 white oak/borate/creosote 7lbs (Koppers).

Figure 11 - Tie #51 red oak/borate/creosote 6lbs (Koppers).

Figure 12 - Tie #51 red oak/borate/creosote 6lbs (Koppers).

Figure 13 - Tie #61 red oak/1 step creosote borate (Stella Jones).

Figure 14 - Tie #61 red oak/1 step creosote borate (Stella Jones).

Figure 15 - Tie #71 white oak/one step creosote borate (Stella Jones).

Figure 16 - Tie #71 white oak/one step creosote borate (Stella Jones).

Figure 17 - Tie #81 white oak/one step creosote borate (Stella Jones).

Figure 18 - Tie #81 white oak/one step creosote borate (Stella Jones).

Figure 19 – Tie # 91 untreated white oak.

Figure 20 – Tie #91 untreated white oak with light decay visible.

Figure 21 – Tie #101 untreated Douglas fir with decay.

Figure 22 - Tie #101 untreated Douglas fir with decay.

Figure 23 – Tie #111 Douglas fir/DOT/ACZA (Lonza).

Figure 24 - Tie #111 Douglas fir/DOT/ACZA (Lonza).

Figure 25 – Tie #121 red oak/DOT/ACZA/oil (Lonza).

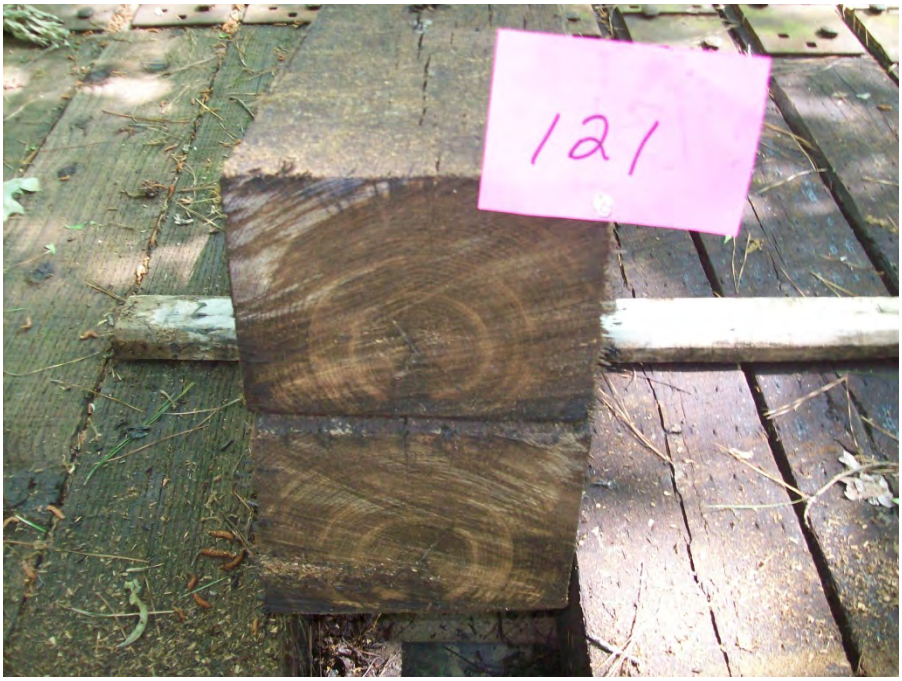

Figure 26 - Tie #121 red oak/DOT/ACZA/oil (Lonza).

Figure 27 – Tie #131 red oak/ACZA/oil (Lonza).

Figure 28 - Tie #131 red oak/ACZA/oil (Lonza).

Figure 29 – Tie #136 white oak/ACZA/oil (Lonza).

Figure 30 - Tie #136 white oak/ACZA/oil (Lonza).

Figure 31 – Tie #141 white oak/DOT/ACZA/oil (Lonza).

Figure 32 - Tie #141 white oak/DOT/ACZA/oil (Lonza).

Figure 33 - Tie # 151 redo oak/DOT/ACZA/oil (Lonza).

Figure 34 - Tie # 151 redo oak/DOT/ACZA/oil (Lonza).

Figure 35 – Tie #161 red oak/ACZA (Lonza).

Figure 36 - Tie #161 red oak/ACZA (Lonza).

Figure 37 – Tie #171 white oak/ACZA (Lonza).

Figure 38 - Tie #171 white oak/ACZA (Lonza).

Figure 39 – Tie #181 Douglas fir/P2 creosote (Lonza).

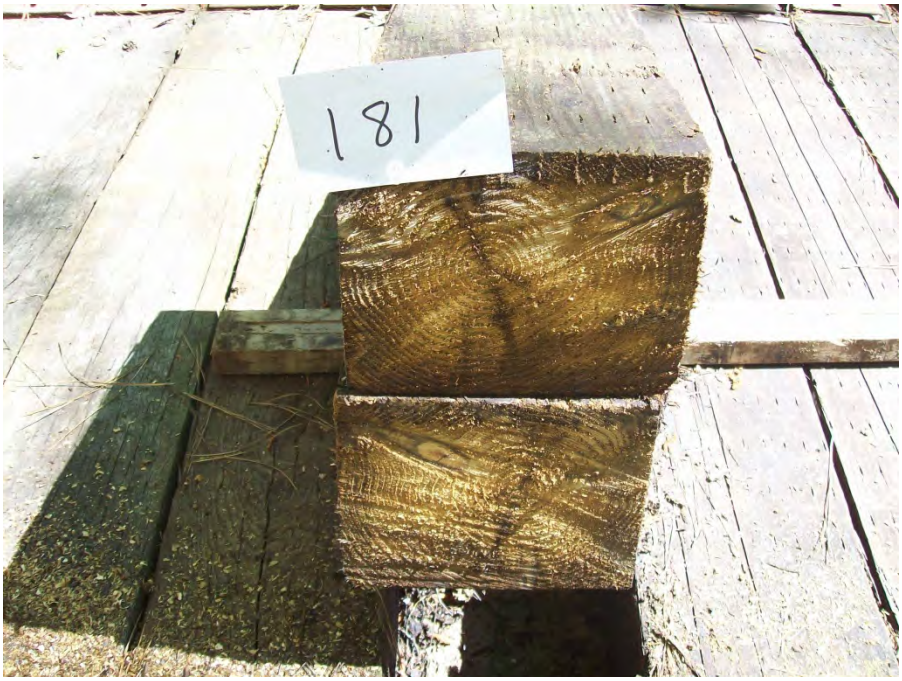

Figure 40 - Tie #181 Douglas fir/P2 creosote (Lonza).

3 

Figure 41 – Tie #191 white oak/ACZA/ET (Lonza).

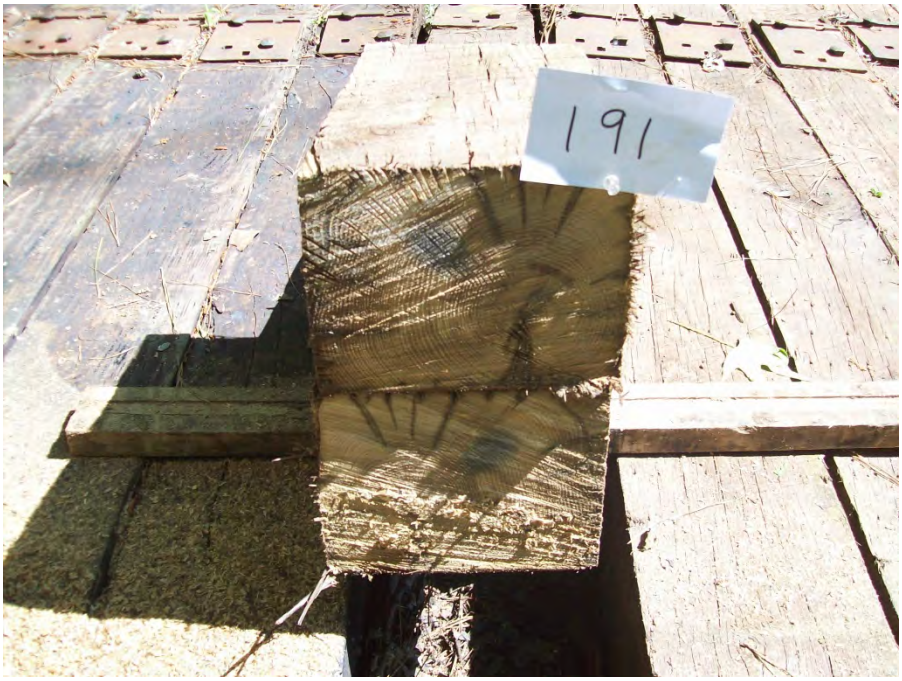

Figure 42- Tie #191 white oak/ACZA/ET (Lonza).

Figure 43 – Tie #201 Douglas fir/ACZA/DOT/ET (Lonza).

Figure 44 - Tie #201 Douglas fir/ACZA/DOT/ET (Lonza).

Figure 45 – Tie #211 red oak/ACZA/ET (Lonza).

Figure 46 – Tie #211 red oak/ACZA/ET (Lonza).

Figure 47 – Tie #221 white oak/ACZA/DOT (Lonza).

Figure 48 - Tie #221 white oak/ACZA/DOT (Lonza).

Figure 49 – Tie # 231 white oak/DOT/ACZA/ET (Lonza).

Figure 50 - Tie # 231 white oak/DOT/ACZA/ET (Lonza).

Figure 51 – Tie #241 red oak/ACZA/DOT/ET (Lonza).

Figure 52 - Tie #241 red oak/ACZA/DOT/ET (Lonza).

Site #2 McNeill Site

Figure 53 – Tie #2 white oak/creosote (Stella Jones).

Figure 54 - Tie #2 white oak/creosote (Stella Jones).

Figure 55 – Tie #11 red oak/one step creosote borate (Stella jones).

Figure 56 - Tie #11 red oak/one step creosote borate (Stella jones).

Figure 57 – Tie #21 white oak/one step creosote borate (Stella Jones).

Figure 58 - Tie #21 white oak/one step creosote borate (Stella Jones).

Figure 59 – Tie #31 untreated white oak with decay and beetle damage.

Figure 60 - Tie #31 untreated white oak with decay visible in the sapwood.

Figure 61 – Tie #41 white oak/DOT/ACZA/ET (Lonza).

Figure 62 - Tie #41 white oak/DOT/ACZA/ET (Lonza).

Figure 63 – Tie #51 red oak/DOT/ACZA/ET (Lonza).

Figure 64 - Tie #51 red oak/DOT/ACZA/ET (Lonza).

Figure 65 – Tie #61 Douglas fir/DOT/ACZA/ET (Lonza).

Figure 66 - Tie #61 Douglas fir/DOT/ACZA/ET (Lonza).

Figure 67 – Tie #71 white oak/ACZA/ET (Lonza).

Figure 68 - Tie #71 white oak/ACZA/ET (Lonza).

Figure 69 – Tie #81 red oak/ACZA/ET (Lonza).

Figure 70 - Tie #81 red oak/ACZA/ET (Lonza).

Figure 71 – Tie #91 Douglas fir/DOT/ACZA (Lonza).

Figure 72 - Tie #91 Douglas fir/DOT/ACZA (Lonza).

Figure 73 – Tie #101 untreated Douglas fir.

Figure 74 - Tie #101 untreated Douglas fir.

Figure 75 – Tie #111 white oak/ACZA (Lonza).

Figure 76 - Tie #111 white oak/ACZA (Lonza).

Figure 77 – Tie #121 red oak/ACZA (Lonza).

Figure 78 – Tie #121 red oak/ACZA (Lonza).

Figure 79 – Tie #131 white oak/ACZA/DOT (Lonza).

Figure 80 - Tie #131 white oak/ACZA/DOT (Lonza).

Figure 81 – Tie #141 red oak/DOT/ACZA/oil (Lonza).

Figure 82 – Tie #141 red oak/DOT/ACZA/oil (Lonza).

Figure 83 – Tie #151 red oak/ACZA/oil (Lonza).

Figure 84 - Tie #151 red oak/ACZA/oil (Lonza).

Figure 85 – Tie #156 white oak/ACZA/oil (Lonza).

Figure 86 – Tie #156 white oak ACZA/oil (Lonza).

Figure 87 – Tie #161 red oak/DOT/ACZA/oil (Lonza).

Figure 88 - Tie #161 red oak/DOT/ACZA/oil (Lonza).

Figure 89 – Tie #171 white oak/DOT/ACZA/oil (Lonza).

Figure 90 – Tie #171 white oak/DOT/ACZA/oil (Lonza).

Figure 91 – Tie #181 Douglas fir/P2 (Lonza).

Figure 92 - Tie #181 Douglas fir/P2 (Lonza).

Figure 93 – Tie #191 white oak/creosote/6lbs (Koppers).

Figure 94 - Tie #191 white oak/borate/creosote 6lbs (Koppers).

Figure 95 – Tie #201 white oak/borate/creosote 7lbs (Koppers).

Figure 96 - Tie #201 white oak/borate/creosote 7lbs (Koppers).

Figure 97 – Tie #211 red oak/borate/creosote 7lbs (Koppers).

Figure 98 - Tie #211 red oak/borate/creosote 7lbs (Koppers).

Figure 99 – Tie #221 red oak/borate/creosote 6lbs (Koppers).

Figure 100 - Tie #221 red oak/borate/creosote 6lbs (Koppers).

Figure 101 – Tie #231 red oak/creosote 7lbs (Koppers).

Figure 102 - Tie #231 red oak/creosote 7lbs (Koppers).

Figure 103 – Tie #241 untreated red oak with decay.

Figure 104 - Tie #241 untreated red oak with decay.

Plot Map RTA Phase II Ties (Dorman Lake Site 1)

Position Row 1 runs West -East (Northern most row)

				May-16				
				Decay	Termite	Decay	Termite	Comments
Koppers	1	T6	WO-Bor-6#	10	10	x	x	cut 2016
	2	T6		10	10			
	3	T6		10	10			
	4	T6		10	10			
	5	T6		10	10			
	6	T6		10	10			
	7	T6		10	10			
	8	T6		10	10			
	9	T6		10	10			
	10	T6		10	10			
	11	T70	RO-Bor-7#	10	10	x	x	cut 2016
	12	T70		10	10			
	13	T70		10	10			
	14	T70		10	10			
	15	T70		10	10			loose plate/ck
	16	T70		10	10			
	17	T70		10	10			
	18	T70		10	10			
	19	T70		10	10			
	20	T70		10	10			
	21	blank tag	Unt. RO	7	9	x	x	cut 2016
	22	blank tag		9.5	10			
	23	blank tag		9.5	10			
	24	blank tag		9.5	10			
	25	blank tag		9.5	10			
	26	blank tag		9.5	10			
	27	blank tag		9.5	10			
	28	blank tag		9.5	10			
	29	blank tag		9.5	10			
	30	blank tag		9.5	10			CK
	31	T10	RO-Creo-7#	10	10	x	x	cut 2016
	32	T10		10	10			
	33	T10		10	10			
	34	T10		10	10			
	35	T10		10	10			CK
	36	T10		10	10			CK
	37	T10		10	10			
	38	T10		10	10			
	39	T10		10	10			CK
	40	T10		10	10			CK
	41	T7	WO-Bor-7#	10	10	x	x	cut 2016
	42	T7		10	10			
	43	T7		10	10			
	44	T7		10	10			CK
	45	T7		10	10			CK
	46	T7		10	10			
	47	T7		10	10			CK
	48	T7		10	10			
	49	T7		10	10			
	50	T7		10	10			CK
	51	T60	RO-Bor-6#	10	10	x	x	cut 2016
	52	T60		10	10			
	53	T60		10	10			

	54	T60		10	10	_____	_____	_____
	55	T60		10	10	_____	_____	_____
	56	T60		10	10	_____	_____	_____
	57	T60		10	10	_____	_____	_____
	58	T60		10	10	_____	_____	_____
	59	T60		10	10	_____	_____	_____
	60	T60		10	10	_____	_____	_____
Stella-Jones	61	RO-1 step		10	10	x	x	cut 2016
	62	RO-1 step		10	10	_____	_____	CK_____
	63	RO-1 step		10	10	_____	_____	_____
	64	RO-1 step		10	10	_____	_____	_____
	65	RO-1 step		10	10	_____	_____	_____
	66	RO-1 step		10	10	_____	_____	_____
	67	RO-1 step		10	10	_____	_____	_____
	68	RO-1 step		10	10	_____	_____	_____
	69	RO-1 step		10	10	_____	_____	_____
	70	RO-1 step		10	10	_____	_____	_____
	71	WO-Creo		10	10	x	x	cut 2016
	72	WO-Creo		10	10	_____	_____	CK_____
	73	WO-Creo		10	10	_____	_____	_____
	74	WO-Creo		10	10	_____	_____	_____
	75	WO-Creo		10	10	_____	_____	_____
	76	WO-Creo		10	10	_____	_____	_____
	77	WO-Creo		10	10	_____	_____	_____
	78	WO-Creo		10	10	_____	_____	CK_____
	79	WO-Creo		10	10	_____	_____	_____
	80	WO-Creo		10	10	_____	_____	_____
	81	WO-1 step		10	10	x	x	cut 2016
	82	WO-1 step		10	10	_____	_____	_____
	83	WO-1 step		10	10	_____	_____	_____
	84	WO-1 step		10	10	_____	_____	_____
	85	WO-1 step		10	10	_____	_____	_____
	86	WO-1 step		10	10	_____	_____	_____
	87	WO-1 step		10	10	_____	_____	_____
	88	WO-1 step		10	10	_____	_____	_____
	89	WO-1 step		10	10	_____	_____	_____
	90	WO-1 step		10	10	_____	_____	_____
	91	WO-Unt		9	10	x	x	cut 2016
	92	WO-Unt		9.5	10	_____	_____	_____
	93	WO-Unt		9	10	_____	_____	_____
	94	WO-Unt		9.5	10	_____	_____	CK_____
	95	WO-Unt		9.5	10	_____	_____	_____
	96	WO-Unt		9.5	10	_____	_____	_____
	97	WO-Unt		9.5	10	_____	_____	_____
	98	WO-Unt		9.5	10	_____	_____	_____
	99	WO-Unt		9	10	_____	_____	FB_____
	100	WO-Unt		9	10	_____	_____	_____
Lonza	101	784	DF-Unt.	9	10	x	x	cut 2016
	102	783		9.5	10	_____	_____	_____
	103	782		8	10	_____	_____	_____
	104	781		8	9.5	_____	_____	FB/CK_____
	105	789		9.5	10	_____	_____	_____
	106	788		9.5	10	_____	_____	_____
	107	787		9.5	10	_____	_____	_____
	108	786		9.5	10	_____	_____	FB_____
	109	785		9.5	10	_____	_____	_____
	110	790		9.5	10	_____	_____	_____

111	684	DF-DOT-ACZA	10	10	x	x	cut 2016
112	683		10	10			
113	682		10	10			
114	681		10	10			
115	689		10	10			CK
116	688		10	10			
117	687		10	10			
118	686		10	10			
119	685		10	10			CK
120	690		10	10			
121	581	RO-DOT-ACZA-Oil	10	10	x	x	cut 2016
122	586		10	10			CK
123	587		10	10			CK
124	584		10	10			
125	583		10	10			CK
126	582		10	10			CK
127	585		10	10			
128	590		10	10			CK
129	589		10	10			CK
130	588		10	10			CK
131	735	RO-ACZA-Oil	10	10	x	x	cut 2016
132	734		10	10			
133	732		10	10			
134	733		10	10			
135	731		10	10			CK
136	775	WO-ACZA-Oil	10	10	x	x	cut 2016
137	774		10	10			CK
138	773		10	10			
139	772		10	10			
140	771		10	10			
141	524	WO-DOT-ACZA-Oil	10	10	x	x	cut 2016
142	523		10	10			
143	522		10	10			loose plate
144	521		10	10			loose plate
145	529		10	10			
146	528		10	10			
147	527		10	10			
148	526		10	10			
149	530		10	10			
150	525		10	10			CK
151	641	RO-DOT-ACZA-Oil	10	10	x	x	cut 2016
152	646		10	10			
153	642		10	10			
154	643		10	10			CK
155	644		10	10			CK
156	645		10	10			
157	647		10	10			
158	648		10	10			
159	649		10	10			
160	650		10	10			CK
161	702	RO-ACZA	10	10	x	x	cut 2016
162	703		10	10			
163	704		10	10			
164	705		10	10			
165	709		10	10			CK
166	708		10	10			
167	707		10	10			

168	706		10	10			
169	710		10	10			CK
170	701		10	10			
171	747	WO-ACZA	10	10	x	x	cut 2016
172	746		10	10			CK
173	742		9.5	10			
174	741		10	10			CK
175	744		10	10			
176	749		10	10			
177	748		10	10			CK
178	743		10	10			
179	745		10	10			
180	750		10	10			
181	803	DF-P2	10	10	x	x	cut 2016
182	802		10	10			CK
183	806		10	10			
184	808		10	10			
185	807		10	10			CK
186	805		10	10			CK
187	804		10	10			
188	810		10	10			
189	809		10	10			
190	801		10	10			CK
191	544	WO-ACZA-ET	10	10	x	x	cut 2016
192	543		10	10			
193	542		10	10			CK
194	541		10	10			
195	549		10	10			
196	548		10	10			CK
197	547		10	10			CK
198	546		10	10			
199	545		10	10			CK
200	550		10	10			CK
201	664	DF-ACZA-DOT-ET	10	10	x	x	cut 2016
202	663		10	10			
203	662		10	10			CK
204	661		10	10			
205	669		10	10			CK
206	668		10	10			
207	667		10	10			
208	666		10	10			
209	665		10	10			CK
210	670		10	10			
211	627	RO-ACZA-ET	10	10	x	x	cut 2016
212	628		10	10			
213	629		10	10			
214	630		10	10			
215	622		10	10			CK
216	623		10	10			
217	624		10	10			CK
218	625		10	10			CK
219	626		10	10			
220	621		10	10			CK
221	502	WO-ACZA-DOT	10	10	x	x	cut 2016
222	503		10	10			CK
223	504		10	10			CK
224	505		10	10			

225	507		10	10	_____	_____	_____
226	508		10	10	_____	_____	_____
227	509		10	10	_____	_____	CK_____
228	510		10	10	_____	_____	CK_____
229	501		10	10	_____	_____	CK_____
230	506		10	10	_____	_____	_____
231	564	WO-DOT-ACZA-ET	10	10	x	x	cut 2016
232	563		10	10	_____	_____	_____
233	562		9.5	10	_____	_____	_____
234	561		10	10	_____	_____	CK_____

Position Row 2 runs West -East (Southern most row)

			May-16				
			Decay	Termite	Decay	Termite	Comments
235	569		10	10	_____	_____	_____
236	568		10	10	_____	_____	_____
237	567		10	10	_____	_____	_____
238	566		10	10	_____	_____	_____
239	565		10	10	_____	_____	_____
240	570		10	10	_____	_____	CK_____
241	604	RO-DOT-ACZA-ET	10	10	x	x	cut 2016
242	603		10	10	_____	_____	_____
243	602		10	10	_____	_____	_____
244	601		10	10	_____	_____	CK_____
245	609		10	10	_____	_____	_____
246	608		10	10	_____	_____	CK_____
247	607		10	10	_____	_____	_____
248	606		10	10	_____	_____	_____
249	605		10	10	_____	_____	_____
250	610		10	10			CK

CK=check
FB=fruiting body

Plot Map RTA Phase II Ties (McNeill Site 2)

Position Row 1 runs East - West (Southern most row)

				Mar-16 Decay	Termite	Decay	Termite	Comments
Stella Jones	1	WO-Creo		10	10			check/bowed
	2	WO-Creo		10	10	x	x	cut 2016
	3	WO-Creo		10	10			check
	4	WO-Creo		10	10			check
	5	WO-Creo		10	10			check
	6	WO-Creo		10	10			check
	7	WO-Creo		10	10			check
	8	WO-Creo		10	10			check
	9	WO-Creo		10	10			split
	10	WO-Creo		10	10			split
	11	1-Step-RO		10	10	x	x	cut 2016
	12	1-Step-RO		10	10			check
	13	1-Step-RO		10	10			check
	14	1-Step-RO		10	10			check
	15	1-Step-RO		10	10			
	16	1-Step-RO		10	10			
	17	1-Step-RO		9.5	10			defect top South end
	18	1-Step-RO		10	10			
	19	1-Step-RO		10	10			
	20	1-Step-RO		10	10			check
	21	1-Step-WO		10	10	x	x	cut 2016
	22	1-Step-WO		10	10			
	23	1-Step-WO		10	10			check
	24	1-Step-WO		10	10			
	25	1-Step-WO		10	10			
	26	1-Step-WO		10	10			
	27	1-Step-WO		10	10			
	28	1-Step-WO		10	10			check
	29	1-Step-WO		10	10			check
	30	1-Step-WO		10	10			
	31	Unt. - WO		8	10	x	x	cut 2016
	32	Unt. - WO		9.5	10			FB
	33	Unt. - WO		9.5	10			FB
	34	Unt. - WO		9.5	10			DK top S end
	35	Unt. - WO		10	10			check
	36	Unt. - WO		10	10			check
	37	Unt. - WO		9.5	10			
	38	Unt. - WO		10	10			
	39	Unt. - WO		9.5	9.5			DK top S end
	40	Unt. - WO		8	10			FB/beetle dmg
Lonza	41	572	WO-DOT-ACZA-ET	10	10	x	x	cut 2016
	42	573		10	10			
	43	574		10	10			
	44	575		10	10			check
	45	576		10	10			
	46	577		10	10			
	47	578		10	10			
	48	579		10	10			
	49	580		10	10			

50	571		10	10			
51	611	RO-DOT-ACZA-ET	10	10	x	x	cut 2016
52	612		10	10			
53	613		10	10			check
54	614		10	10			check
55	615		10	10			check
56	617		10	10			
57	618		10	10			check
58	619		10	10			
59	620		10	10			
60	616		10	10			
61	675	DF-DOT-ACZA-ET	10	10	x	x	cut 2016
62	674		10	10			check
63	673		10	10			
64	672		10	10			check
65	671		10	10			check
66	679		10	10			check
67	678		10	10			
68	677		10	10			
69	676		10	10			check
70	680		10	10			
71	555	WO-ACZA-ET	10	10	x	x	cut 2016
72	554		10	10			
73	553		10	10			
74	552		10	10			
75	551		10	10			
76	560		10	10			
77	559		10	10			
78	558		10	10			
79	557		10	10			
80	556		10	10			
81	640	RO-ACZA-ET	10	10	x	x	cut 2016
82	639		10	10			check
83	638		10	10			
84	637		10	10			
85	636		10	10			
86	635		10	10			check
87	634		10	10			
88	633		10	10			
89	632		10	10			
90	631		10	10			
91	695	DF-DOT-ACZA	10	10	x	x	cut 2016
92	694		10	10			end plate corroded
93	693		10	10			check/end plat corroded
94	692		10	10			end plate corroded
95	691		10	10			end plate corroded
96	699		10	10			end plate corroded
97	698		10	10			end plate corroded
98	697		10	10			check/end plat corroded

	99	696		10	10	_____	_____	end plate corroded _____
	100	700		10	10	_____	_____	end plate corroded _____
	101	795	DF-Unt.	9.5	10	x	x	cut 2016
	102	794		10	10	_____	_____	check_____
	103	793		10	10	_____	_____	check_____
	104	792		10	10	_____	_____	check_____
	105	791		10	10	_____	_____	_____
	106	800		9.5	10	_____	_____	FB_____
	107	799		10	10	_____	_____	check_____
	108	798		10	10	_____	_____	FB/check_____
	109	797		10	10	_____	_____	check_____
	110	796		10	10	_____	_____	check_____
	111	755	WO-ACZA	10	10	x	x	cut 2016
	112	754		10	10	_____	_____	end plate corroded _____
	113	753		10	10	_____	_____	end plate corroded _____
	114	752		10	10	_____	_____	end plate corroded _____
	115	751		10	10	_____	_____	end plate corroded _____
	116	760		10	10	_____	_____	Knot/burl under plate area N end_
	117	759		10	10	_____	_____	end plate corroded _____
	118	758		10	10	_____	_____	check/end plat corroded_____
	119	757		10	10	_____	_____	check/end plat corroded_____
	120	756		10	10	_____	_____	end plate corroded _____
	121	712	RO-ACZA	10	10	x	x	cut 2016
	122	713		10	10	_____	_____	end plate corroded _____
	123	714		10	10	_____	_____	end plate corroded _____
	124	715		10	10	_____	_____	end plate corroded _____
	125	717		10	10	_____	_____	end plate corroded _____
	126	718		10	10	_____	_____	end plate corroded _____
	127	719		10	10	_____	_____	end plate corroded _____
	128	720		10	10	_____	_____	end plate corroded _____
	129	716		10	10	_____	_____	end plate corroded _____
	130	711		10	10	_____	_____	end plate corroded _____
	131	511	WO-ACZA-DOT	10	10	x	x	cut 2016
	132	512		10	10	_____	_____	end plate corroded _____
	133	513		10	10	_____	_____	end plate corroded _____
	134	514		10	10	_____	_____	end plate corroded _____
	135	515		10	10	_____	_____	end plate corroded _____
	136	516		10	10	_____	_____	end plate corroded _____
	137	517		10	10	_____	_____	end plate corroded _____
	138	518		10	10	_____	_____	end plate corroded _____
	139	519		10	10	_____	_____	end plate corroded _____
	140	520		10	10	_____	_____	end plate corroded _____
			Row 2 runs East - West (middle row)					
Lonza	141	595	RO-DOT-ACZA-Oil	10	10	x	x	cut 2016
	142	594		10	10	_____	_____	check_____
	143	593		10	10	_____	_____	check_____
	144	592		10	10	_____	_____	check_____
	145	600		10	10	_____	_____	check_____
	146	599		10	10	_____	_____	_____
	147	598		10	10	_____	_____	check_____
	148	597		10	10	_____	_____	check_____

	149	596		10	10	_____	_____	check_____
	150	591		10	10	_____	_____	check_____
	151	740	RO-ACZA-Oil	10	10	x	x	cut 2016
	152	739		10	10	_____	_____	check_____
	153	738		10	10	_____	_____	severe check_____
	154	737		10	10	_____	_____	severe check_____
	155	736		10	10	_____	_____	_____
	156	779	WO-ACZA-Oil	10	10	x	x	cut 2016
	157	780		10	10	_____	_____	check_____
	158	777		10	10	_____	_____	_____
	159	778		10	10	_____	_____	_____
	160	776		10	10	_____	_____	_____
	161	655	RO-DOT-ACZA-Oil	10	10	x	x	cut 2016
	162	654		10	10	_____	_____	split_____
	163	653		10	10	_____	_____	check_____
	164	652		10	10	_____	_____	split_____
	165	660		10	10	_____	_____	check_____
	166	659		10	10	_____	_____	check_____
	167	658		10	10	_____	_____	check_____
	168	657		10	10	_____	_____	check_____
	169	651		10	10	_____	_____	check_____
	170	656		10	10	_____	_____	check_____
	171	531	WO-DOT-ACZA-Oil	10	10	x	x	cut 2016
	172	532		10	10	_____	_____	check_____
	173	533		10	10	_____	_____	check_____
	174	534		10	10	_____	_____	check_____
	175	536		10	10	_____	_____	_____
	176	537		10	10	_____	_____	_____
	177	538		10	10	_____	_____	check_____
	178	539		10	10	_____	_____	sever check - holding water ____
	179	540		10	10	_____	_____	_____
	180	535		10	10	_____	_____	sever check - holding water ____
	181	820	DF-P2	10	10	x	x	cut 2016
	182	817		10	10	_____	_____	check_____
	183	819		10	10	_____	_____	check_____
	184	811		10	10	_____	_____	_____
	185	815		10	10	_____	_____	_____
	186	816		10	10	_____	_____	_____
	187	814		10	10	_____	_____	_____
	188	813		10	10	_____	_____	_____
	189	818		10	10	_____	_____	check_____
	190	812		10	10	_____	_____	_____
Koppers	191	T6	WO-Bor-6#	10	10	x	x	cut 2016
	192	T6		10	10	_____	_____	check & split S end_____
	193	T6		10	10	_____	_____	_____
	194	T6		10	10	_____	_____	_____
	195	T6		10	10	_____	_____	_____
	196	T6		10	10	_____	_____	_____
	197	T6		10	10	_____	_____	check_____
	198	T6		10	10	_____	_____	_____
	199	T6		10	10	_____	_____	check_____

200	T6		10	10	_____	_____	_____
201	T7	WO-Bor-7#	10	10	x	x	cut 2016
202	T7		10	10	_____	_____	_____
203	T7		10	10	_____	_____	_____
204	T7		10	10	_____	_____	check_____
205	T7		10	10	_____	_____	_____
206	T7		10	10	_____	_____	_____
207	T7		10	10	_____	_____	check_____
208	T7		10	10	_____	_____	check_____
209	T7		10	10	_____	_____	_____
210	T7		10	10	_____	_____	severe check/bad tie_____
211	T70	RO-Bor-7#	10	10	x	x	cut 2016
212	T70		10	10	_____	_____	check_____
213	T70		10	10	_____	_____	_____
214	T70		10	10	_____	_____	check_____
215	T70		10	10	_____	_____	_____
216	T70		10	10	_____	_____	_____
217	T70		10	10	_____	_____	_____
218	T70		10	10	_____	_____	_____
219	T70		10	10	_____	_____	_____
220	T70		10	10	_____	_____	check_____
221	T60	RO-Bor-6#	10	10	x	x	cut 2016
222	T60		10	10	_____	_____	check_____
223	T60		10	10	_____	_____	_____
224	T60		10	10	_____	_____	_____
225	T60		10	10	_____	_____	check_____
226	T60		10	10	_____	_____	_____
227	T60		10	10	_____	_____	_____
228	T60		10	10	_____	_____	check_____
229	T60		10	10	_____	_____	_____
230	T60		10	10	_____	_____	_____
231	T10	RO-Creo-7#	10	10	x	x	cut 2016
232	T10		10	10	_____	_____	_____
233	T10		10	10	_____	_____	check_____
234	T10		10	10	_____	_____	_____
235	T10		10	10	_____	_____	_____
236	T10		10	10	_____	_____	_____
237	T10		10	10	_____	_____	check_____
238	T10		10	10	_____	_____	_____
239	T10		10	10	_____	_____	check_____
240	T10		10	10	_____	_____	check_____
241	blank tag	Unt. RO	8	10	x	x	cut 2016
242	blank tag		9.5	10	_____	_____	FB_____
243	blank tag		9.5	10	_____	_____	_____
244	blank tag		9.5	10	_____	_____	FB_____
245	blank tag		10	10	_____	_____	_____
246	blank tag		9.5	10	_____	_____	_____
247	blank tag		9.5	10	_____	_____	FB/split/gator_____
248	blank tag		9.5	10	_____	_____	FB_____
249	blank tag		9.5	10	_____	_____	split/gator_____
250	blank tag		9	10	_____	_____	_____

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Applicable Standards:
None: