American Wood
Protection Association
Protecting Wood Since 1904

AWPA Technical Committee P-3
Fall 2022 Standardization Cycle

Ballot Opening/Closing Dates:	10/17/2022 to 11/16/2022
Items Subject to Recirculation:	N/A
Recirculation Ballot Opening/Closing:	N/A
Total Number Committee Members:	32
Number of Eligible Voters:	30
Number of Eligible Ballots Received:	22
Ballot Return Percentage:	73.3%
Deadline for Appeals:	N/A – No Unresolved Objections

AWPA Standard HSA-18

22F-P3-HSA: Proposal to Revise HSA Solvency Applicability

Proponent(s): Dennis Morgan

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 21 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

<table>
<tr><th>▼ID</th><th>Item</th><th>Reason</th><th>Proposed Change</th><th>Committee Status</th></tr>
<tr><td>1314</td><td>AWPA HSA 18 SECTION STANDARD FOR HYDROCARBON SOLVENT TYPE A [Table Data]</td><td>Dennis Morgan:
Testing for solvency of pentachlorophenol should only be required when penta is the intended preservative. Penta solvency cannot be required when other preservatives are used with this solvent.</td><td>
<table>
<tr><th>Solvent Code</th><th>HSA</th><th>Description</th><th>Reference Standards</th></tr>
<tr><td>Solvent Name</td><td>Hydrocarbon Solvent Type A</td><td>Solvent for preparing solutions of oil-borne preservatives such as pentachlorophenol and copper-naphthenate</td><td>The ASTM Standards referred to herein may be obtained from the ASTM International, 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19428</td></tr>
<tr><td colspan="4">Solvent Composition</td></tr>
</table>
</td><td></td></tr>
</table>

Composition	HSA shall be composed of • hydrocarbon solvent or • blends of hydrocarbon solvents and auxiliary solvents	
Physical Chem. Requirements [of the Blend]		
Distillation, Total Volume of Fractions [Ref. Standard ASTM D86 or D1160]	If more than 50% is distilled over before reaching distilling point of 254°C (490°F), then the petroleum is deemed unacceptable. If more than 90% is distilled over before reaching distilling point of 307°C (585°F), then the petroleum is deemed unacceptable.	
Color	N.d.	
Flash Point [Ref. Standard ASTM D93]	In the interest of plant and worker safety, Hydrocarbon Solvent A should have a minimum flash point of 66°C (150°F) by PMC	
Specific Gravity [Ref. Standard ASTM D287]	Min API = 24 Max. Specific Gravity = 0.910 min @ 15.6°C (60°F) Max. is a recommendation and applicable when either steam conditioning or final steaming are employed in the treatment process	
Solvency (applicable only when PCP is used with HSA~~only~~) [Ref. Standard AWPA A82]	10 g min in 90 grams of whole oil 6 g min in 100 ml of (undistilled) oil fraction above 260°C [From Distillation according ASTM D86 or ASTM D1160]	
Viscosity	**Kinematic Viscosity [Ref. Standard ASTM D445]**	Test material: 100 ml of (undistilled) Oil fraction above 260°C [From Distillation according ASTM D86 or ASTM D1160] 3.46 cSt min @ 38°C (100°F)
	SSU Viscosity [Ref. Standard ASTM D88]	37.5 min @ 38°C (100°F)
Water & Sediment [Ref. Standard ASTM D1796]	0.5% max, B.S.&W.	
Physical Chemical Properties of Auxiliary Solvent		
Restrictions	If any auxiliary solvents used are chlorinated solvents, they should not be distilled in a copper distillation apparatus and the lime ignition method should not be used for boring assay	
Leaching of PCP [Ref. Standard AWPA A85]	The auxiliary solvent shall not induce leaching of PCP from the total preservative blend as determined by the analytical reference method. The amount of PCP found in the test sample shall not be less than that found in the control	
Water Solubility	Any auxiliary solvent shall not be completely water soluble Any auxiliary solvent shall be permitted to have solubility in water to the extent that upon saturation, the solubility of pentachlorophenol in the total preservative blend shall not be affected and that emulsion do not result that would preclude its use.	
Enforcement		
Historical	Adopted in 2009 (formerly AWPA Standard P9, Type A)	
Reaffirmation	1997, 2003, 2009	
Amendments	2011, 2014, 2018	

AWPA Standard HSC-17

22F-P3-HSC: Proposal to Reaffirm HSC Without Revision

Proponent(s): Bob Baeppler

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 21 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

▼ID	Item	Reason	Proposed Change	Committee Status
1267	AWPA HSC 17	**Bob Baeppler:** No known issues with the existing standard.	**Additional Comment:** Reaffirm without Revisions	

AWPA Standard HSF-17

22F-P3-HSF: Proposal to Reaffirm HSF Without Revision

Proponent(s): Chuck Cheeks

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 22 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

▼ID	Item	Reason	Proposed Change	Committee Status
1205	AWPA HSF 17	**Chuck Cheeks:** No known issues with the existing standard.	**Additional Comment:** Reaffirm without Revisions	

AWPA Standard HSG-18

22F-P3-HSG: Proposal to Revise HSG Solvency Applicability

Proponent(s): Dennis Morgan

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 22 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

<table>
<tr><th>▼ID</th><th>Item</th><th>Reason</th><th>Proposed Change</th><th>Committee Status</th></tr>
<tr>
<td>1316</td>
<td>AWPA HSG 18 SECTION STANDARD FOR HYDROCARBON SOLVENT TYPE G [Table Data]</td>
<td>Dennis Morgan:
Testing for solvency of pentachlorophenol should only be required when penta is the intended preservative. Penta solvency cannot be required when other preservatives are used with this solvent.</td>
<td>
<table>
<tr><td>Solvent Code</td><td>HSG</td><td>Description</td><td>Reference Standards</td></tr>
<tr><td>Solvent Name</td><td>Hydrocarbon Solvent Type G</td><td>High Boiling Hydrocarbon Solvent for preparing solutions of pentachlorophenol</td><td>The ASTM Standards referred to herein may be obtained from the ASTM International, 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19428</td></tr>
<tr><td colspan="4">Solvent Composition</td></tr>
<tr><td colspan="2">Composition</td><td colspan="2">HSG shall be composed of
• Hydrocarbon solvents or a
• blend of hydrocarbon solvents and auxiliary solvents</td></tr>
<tr><td colspan="4">Physical Chem. Requirements [of the Blend]</td></tr>
<tr><td colspan="2">Distillation, Total Volume of Fractions [Ref. Standard ASTM D1160]</td><td colspan="2">If more than 50% is distilled over before reaching distilling point of 375°C (707°F), then the petroleum is deemed unacceptable.
If more than 90% is distilled over before reaching distilling point of 435°C (815°F), then the petroleum is deemed unacceptable.</td></tr>
<tr><td colspan="2">Color</td><td colspan="2">N.d.</td></tr>
<tr><td colspan="2">Flash Point [Ref. Standard ASTM D93]</td><td colspan="2">93°C (200°F) min by Pensky-Martens Closed Cup</td></tr>
<tr><td colspan="2">Specific Gravity [Ref. Standard ASTM D287]</td><td colspan="2">Min API = 25.7
Max. Specific Gravity = 0.90 min @ 15.6°C (60°F) (Recommended)
Max. recommendation is applicable when either steam conditioning or final steaming are employed in the treatment process</td></tr>
<tr><td colspan="2">Solvency (applicable only when PCP is used with HSG~~only~~) [Ref. Standard AWPA A82]</td><td colspan="2">At 24°C (75°F) ≥ 2% by weight over the intended solution strength used in plant operation</td></tr>
<tr><td colspan="2">Viscosity</td><td>Kinematic Viscosity-Recommended [Ref. Standard ASTM D445]</td><td>3.0 to 10.0 cSt min @ 100°C (212°F)</td></tr>
</table>
</td>
<td></td>
</tr>
</table>

	SSU Viscosity [Ref. Standard ASTM D88] 37.5 min @ 38°C (100°F)
Water & Sediment [Ref. Standard ASTM D1796]	0.5% max, B.S.&W. The solvent system shall not form stable oil-in-water or water-in-oil emulsions that create plant operational problems. (AWPA Standard A35)
Physical Chemical Properties of Auxiliary Solvent	
Restrictions	• No chlorinated auxiliary solvents shall be used • Auxiliary solvent shall be 16% maximum by volume
Water Solubility	• Any auxiliary solvent shall not be water soluble in greater than trace amounts
Enforcement	
Historical	Adopted in 2011 (formerly AWPA Standard P9, Type G)
Adopted as P9-G	2009
Reaffirmation	2017
Amendments	2018

AWPA Standard P37-17

22F-P3-P37: Proposal to Reaffirm P37 & Revise Analytical Methods Section

Proponent(s): Jim Brient

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 22 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

<table>
<tr><th>▼ID</th><th>Item</th><th>Reason</th><th>Proposed Change</th><th>Committee Status</th></tr>
<tr><td>1142</td><td>AWPA P37 17</td><td>Jim Brient:
No known issues with the existing standard.</td><td>Additional Comment: Reaffirm without Revisions
Attachment(s): <i>Fall 2022 P37 oxine copper reaffirmation data package.pdf</i></td><td></td></tr>
<tr><td>1106</td><td>AWPA P37 17 SECTION STANDARD FOR OXINE COPPER (COPPER 8 QUINOLINATE) (CU8) [Table Data]</td><td>Jim Brient:
Because more treaters have XRF capability than ICP, the oxine copper task group proposes amending the Analytical Methods section of Standard P37 to add Standard A9 (XRF) as a suitable method for assay of oxine copper solutions and treated wood. See attached data package for information on XRF</td><td>
<table>
<tr><td>Preservative Code</td><td>Cu8</td><td>Description of the Preservative</td><td>Application Method/Use Pattern</td><td>Acceptable Carriers/Diluents</td></tr>
<tr><td>Preservative Name</td><td>Oxine Copper (Copper 8-Quinolinate)</td><td>Oil-borne Preservative</td><td>Vacuum-pressure treatment/ Non-pressure treatment</td><td>Hydrocarbon Solvents. Cu8 shall be in a solubilized formulation and not a dispersed formulation.</td></tr>
<tr><td colspan="5">Preservative Composition & Physical Chem. Requirements</td></tr>
</table>
</td><td></td></tr>
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<table>
<tr>
<td></td>
<td></td>
<td>assays. No other changes are proposed for reaffirmation of P37.</td>
<td>
<table>
<tr><td>Composition</td><td>Copper-8-quinolinate: 95% min.
Inert Ingredients: 5% max.</td></tr>
<tr><td>Purity Criteria</td><td>Oxine copper formulation should be free of amines, phosphoric acid or naphthenic acid and its derivatives.</td></tr>
<tr><td rowspan="4">Physical Properties</td><td>Cu-content: Cu as metal, 17% min</td></tr>
<tr><td>Specific Gravity: 1.687 g/cm^3 @ T = 20°C</td></tr>
<tr><td>Solubility (mg Cu8/l solvent @ T=20°C):
Acetone 27.6
Methanol 150
Toluene 45.9
Water 1</td></tr>
<tr><td>Octanol/Water Partition Coefficient: Log Po/w = 2.46</td></tr>
<tr><td colspan="2">Treating Solution</td></tr>
<tr><td colspan="2">No specific criteria defined</td></tr>
<tr><td colspan="2">Analytical Methods
[Only major analytical methods are listed. Refer to the AWPA BOS for additionally applicable standards]</td></tr>
<tr><td>Concentrate/Solutions</td><td>AWPA Standard A9, A21</td></tr>
<tr><td>Wood</td><td>AWPA Standard A9, A14, A21, A71</td></tr>
<tr><td colspan="2">Committee Recommendations</td></tr>
<tr><td>Minimum Retentions</td><td>Committee P-3 recommended the following minimum retentions: Above Ground non-soil contact—0.2 pcf (3.2 kg/m^3) solubilized Cu8 with 0.02 pcf (0.32 kg/m^3) oxine copper as the active ingredient.</td></tr>
<tr><td colspan="2">Enforcement</td></tr>
<tr><td>Historical</td><td>Adopted in 2008 (formerly AWPA Standard P8 No. 3)</td></tr>
<tr><td>Reaffirmation</td><td>1995, 2011 and 2017</td></tr>
<tr><td>Amendments</td><td>2011, 2017</td></tr>
</table>
Attachment(s): <i>Fall 2022 P37 oxine copper reaffirmation data package.pdf</i>
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</tr>
</table>

American Wood Protection Association
Protecting Wood Since 1904

AWPA Technical Committee P-4
Fall 2022 Standardization Cycle

Ballot Opening/Closing Dates:	10/17/2022 to 11/16/2022
Items Subject to Recirculation:	N/A
Recirculation Ballot Opening/Closing:	N/A
Total Number Committee Members:	42
Number of Eligible Voters:	42
Number of Eligible Ballots Received:	33
Ballot Return Percentage:	78.6%
Deadline for Appeals:	N/A – No Unresolved Objections

AWPA Standard PXX1

22F-P4-PXX1: Proposal to Adopt MCQ-D Standard

Proponent(s): Barry Sewell

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 29 Yes, 0 No, and 4 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

<table>
<tr><th>▼ID</th><th>Item</th><th>Reason</th><th>Proposed Change</th><th>Committee Status</th></tr>
<tr><td>1099</td><td>AWPA P XX1 SECTION STANDARD FOR MICRONIZED COPPER QUAT TYPE D (MCQ D) [Table Data]</td><td>Barry Sewell: List Micronized Copper Quat (MCQ-D) as a new preservative standard. Data package is attached.</td><td>
<table>
<tr><th>Preservative Code</th><th>MCQ-D</th><th>Assignment</th><th>Description of the Preservative</th><th>Application Method/Use Pattern</th><th>Acceptable Carriers/Diluents</th></tr>
<tr><td></td><td></td><td>This standard has been</td><td>Waterborne preservative,</td><td>Vacuum-pressure</td><td>Water</td></tr>
</table>
</td><td></td></tr>
</table>

Preservative Name	**Micronized Copper Quat - Type D**	assigned to Koppers Performance Chemicals, Inc.	dispersed particles	treatment / Non-pressure treatment	
Preservative Composition & Physical Chemical Requirements					
Composition on a **100% Active Basis**	Copper as CuO: 66.7% Quat as DDAC: 33.3%				
Purity Criteria – Actives	The treating solution shall contain basic copper carbonate and quaternary ammonium compounds derived from compounds in excess of 95% purity on an anhydrous basis. The quat component chain distribution, as DDAC, shall consist of not less than 95% didecyldimethyl ammonium carbonate or chloride compounds.				
Essential Formulants	The components shall be dispersed in water using suitable surfactants capable of maintaining adequate stability for treatment.				
Particle Size Distribution	Micronized components shall be manufactured with a particle size distribution d95 of less than 1 micron.				
Treating Solution					

Tolerances	Work solution tolerances on a 100% Active Basis Min % Max % Copper as CuO: 62.0 71.0 Quat 29.0 38.0 The composition of the treating solution may deviate outside the limits specified above provided the preservative retention in the treated material is determined by assay and the retention so determined conforms to the requirements specified in the tables in Section 3 of AWPA Standard T1 and immediate action is taken to adjust the composition of the treating solution.
Limitations	**pH:** 8-11 @ T = 20 to 30°C
	Temperature: None, except as limited under Standard T1
Analytical Methods [Only major analytical methods are listed. Refer to the AWPA BOS for additionally applicable standards]	
Concentrate/Solutions	Cu: AWPA A9, A21 Quat: AWPA A17, A37
Wood	Cu: AWPA A9, A21 Quat: AWPA A16, A18, A36, A37
Committee Recommendations	
Minimum Retentions	Committee P-4 recommended the following minimum retentions: UC1 to UC3B—0.15pcf (2.4 kg/m^3), UC4A—0.40 pcf (6.4 kg/m^3), and UC4B to UC4C—0.60 pcf (9.6 kg/m^3). Note: Retentions are suitable in areas with Formosan termite activity.

-**Enforcement**	
-**Historical**	None
-**Reaffirmation**	None
-**Amendments**	None

Attachment(s): *MCQ DATA PACKAGE.pdf*

American Wood
Protection Association
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AWPA Technical Committee P-5
Fall 2022 Standardization Cycle

Ballot Opening/Closing Dates:	10/17/2022 to 11/16/2022
Items Subject to Recirculation:	22F-P5-A62
Recirculation Ballot Opening/Closing:	11/29/2022 to 12/09/2022
Total Number Committee Members:	24
Number of Eligible Voters:	24
Number of Eligible Ballots Received:	21
Ballot Return Percentage:	87.5%
Deadline for Appeals:	12/26/2022

AWPA Standard A13-17

22F-P5-A13: Proposal to Revise A13 With Minor Changes

Proponent(s): Jim Brient, Nelson Wanggui

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 19 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

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ID	▲Item	Reason	Proposed Change	Committee Status
1130	AWPA A13 17 SECTION 4.1 PARA 11	**Nelson Wanggui:** remove periods	**k.** Funnels, separatory, 250 ml~~.~~ or 500 ml~~.~~, pear shape (See Note 1).	
1113	AWPA A13 17 SECTION 5.1	**Nelson Wanggui:** remove period	**5.1** Weigh 5.0 grams (See Note 2) of copper naphthenate concentrate into a 400 ml~~.~~ Griffin beaker.	
1114	AWPA A13 17 SECTION 5.2	**Nelson Wanggui:** remove period	**5.2** Add 50 ml~~.~~ of isopropyl alcohol to the copper naphthenate. Warm the beaker on a hot plate or steam bath if necessary.	
1115	AWPA A13 17 SECTION 5.3	**Nelson Wanggui:** remove period	**5.3** Add 40 ml~~.~~ (See Note 2, above) of dilute sulfuric acid, 10%, to it and stir with a glass rod.	
1116	AWPA A13 17 SECTION 5.4	**Nelson Wanggui:** remove period	**5.4** Transfer the contents of the beaker into a 250 ml~~.~~ (See Note 1, above) separatory funnel.	
1117	AWPA A13 17 SECTION 5.5	**Nelson Wanggui:** remove period	**5.5** Rinse the beaker with 10 ml~~.~~ Petroleum Ether twice and transfer into the separatory funnel.	

1118	AWPA A13 17 SECTION 5.6	**Nelson Wanggui:** remove period	**5.6** Add 30 ml~~.~~ of Petroleum Ether to the contents of the separatory funnel.	
1119	AWPA A13 17 SECTION 5.9	**Nelson Wanggui:** remove periods	**5.9** Transfer the lower aqueous layer into a second 250 ml~~.~~ separatory funnel. If larger quantities have been used, use the larger (500 ml~~.~~) separatory funnel. (See Note 1, above)	
1120	AWPA A13 17 SECTION 5.10	**Nelson Wanggui:** remove periods	**5.10** Add 10 ml~~.~~ (See Note 2) of dilute sulfuric acid (10%) solution and 30 ml~~.~~ of Petroleum Ether to the second separatory funnel. Shake well and allow it to separate as in Steps 5.7 and 5.8.	
1121	AWPA A13 17 SECTION 5.12	**Nelson Wanggui:** remove period	**5.12** Transfer the remaining ether layer in the second separatory funnel to the first separatory funnel. Rinse the second separatory funnel with 20 ml~~.~~ of Petroleum Ether and transfer it to the first separatory funnel.	
1107	AWPA A13 17 SECTION 5.13	**Nelson Wanggui:** There are not such Steps 4.7 and 4.8. The contents were generated in Steps 5.7 and 5.8, and repeat step 5.10.	**5.13** Shake the contents as in Steps 5~~4~~.7 and 5~~4~~.8 and allow any small amount of aqueous phase to settle out.	**Withdrawn by proponent prior to committee meeting.**
1206	AWPA A13 17 SECTION 5.13	**Jim Brient:** During the previous reaffirmation of A13 in 2017, a new section on Safety Precautions was added, with the subsequent sections being re-numbered. However, a reference within the text at step 5.13 was not updated at that time, resulting in an erroneous reference. The current revision corrects that erroneous reference as shown above. No other changes to this standard are needed.	**5.13** Shake the contents as in Steps ~~4.7~~5.7 and ~~4.8~~5.8 and allow any small amount of aqueous phase to settle out.	
1122	AWPA A13 17 SECTION 5.16	**Nelson Wanggui:** remove period	**5.16** Collect the filtrate in a 250 ml~~.~~ Erlenmeyer flask.	
1123	AWPA A13 17 SECTION 5.18	**Nelson Wanggui:** remove period	**5.18** Rinse the Erlenmeyer flask with two 10 ml~~.~~ portions of petroleum ether and add the rinsings to the evaporating dish.	
1124	AWPA A13 17 SECTION 6.1	**Nelson Wanggui:** remove period	**6.1** Weight the sample to ±0.001 grams into a 250 ml~~.~~ Erlenmeyer flask. (S = wt. in grams).	
1125	AWPA A13 17 SECTION 6.2	**Nelson Wanggui:** remove period	**6.2** Add 50 ml~~.~~ isopropyl alcohol, no more, and 1 ml. of phenolphthalein indicator solution. Swirl and stir.	
1126	AWPA A13 17 SECTION 6.5	**Nelson Wanggui:** remove periods	**6.5** Add 30 ml~~.~~ of Petroleum Ether to the funnel along with 50 ml~~.~~ of distilled water.	
1108	AWPA A13 17 SECTION 6.8	**Nelson Wanggui:** Extract same as Step 6.6, not step 5.6	**6.8** Add 30 ml. Petroleum Ether to the second funnel and extract as in Step 6~~5~~.6.	
1127	AWPA A13 17 SECTION 6.8	**Nelson Wanggui:** remove period	**6.8** Add 30 ml~~.~~ Petroleum Ether to the second funnel and extract as in Step 5.6.	
1335	AWPA A13 17 SECTION 6.8	**AWPA Staff:** Consolidate from 1108 & 1127	**6.8** Add 30 ml~~.~~ Petroleum Ether to the second funnel and extract as in Step 6~~5~~.6.	
1128	AWPA A13 17 SECTION 6.10	**Nelson Wanggui:** remove period	**6.10** Add 30 ml~~.~~ 10% sulfuric acid to the first separatory funnel.	
1109	AWPA A13 17 SECTION 6.11	**Nelson Wanggui:** extract same as step 6.6, not step 5.6	**6.11** Add 50 ml. of Petroleum Ether to the first separatory funnel. Perform an extraction as in Step 6~~5~~.6 above.	
1129	AWPA A13 17 SECTION 6.11	**Nelson Wanggui:** remove period	**6.11** Add 50 ml~~.~~ of Petroleum Ether to the first separatory funnel. Perform an extraction as in Step 5.6 above.	
1336	AWPA A13 17 SECTION 6.11	**AWPA Staff:** Consolidate from 1109 & 1129	**6.11** Add 50 ml~~.~~ of Petroleum Ether to the first separatory funnel. Perform an extraction as in Step 6~~5~~.6 above.	
1110	AWPA A13 17 SECTION 6.12	**Nelson Wanggui:** should be step 6.6, not 5.6	**6.12** Transfer the lower aqueous layer to the second separatory funnel. Add 50 ml~~.~~ Petroleum Ether to the second separatory funnel and extract as in Step 6~~5~~.6 above. Keep the upper ether layer in the first separatory funnel by transferring it to an Erlenmeyer flask.	
1111	AWPA A13 17 SECTION 6.13	**Nelson Wanggui:** should be step 6.12, not 5.12	**6.13** Discard the lower aqueous layer in the second separatory funnel. Transfer the upper ether layer to the Erlenmeyer flask used in Step 6~~5~~.12 above.	
1112	AWPA A13 17 SECTION 6.17	**Nelson Wanggui:** remove extra periods	**6.17** Add 50 ml~~.~~ isopropyl alcohol and 1 ml~~.~~ Phenolphthalein indicator solution. Swirl and stir.	

AWPA Standard A14-17

22F-P5-A14: Proposal to Revise A14 Section 1.0

Proponent(s): Jim Brient

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 19 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

▼ID	Item	Reason	Proposed Change	Committee Status
1207	AWPA A14 17 SECTION 1.0 PARA 1	**Jim Brient:** Standard A14 was originally adopted to measure water-soluble copper salts in CuN. Standard P36 was amended in 2016 to specifically prohibit the addition of C9 or lower carboxylic acids in CuN since those copper salts can be appreciably water-soluble. This revision adds language to clarify "adulterants" to include low molecular weight copper carboxylates that do not conform to P36. At the P-5 meeting I will also propose making editorial revisions to change all references to volume from "ml." to "ml" by deleting the final period where relevant in steps 4.1, 5.2, 5.3, 5.6, 5.8,5.10,5.11,5.12, and 5.13. No other changes are being proposed or needed for this standard.	This method is intended for the testing of oil-borne copper naphthenate concentrates (6 and 8% copper) used in the preparation of wood preserving solutions. Copper Naphthenate is practically insoluble in water but some non-naphthenic adulterants not conforming to Standard P36 such as copper acetate and copper propionate have substantial water solubility.	

AWPA Standard A20-17

22F-P5-A20: Proposal to Withdraw A20 Without Prejudice for Lack of Use

Proponent(s): Nelson Wanggui

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 19 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

▼ID	Item	Reason	Proposed Change	Committee Status
1215	AWPA A20 17	**Nelson Wanggui:** No known issues with the existing standard. Lack of use	**Additional Comment:** Withdraw Standard	

AWPA Standard A22-17

22F-P5-A22: Proposal to Reaffirm A22 Without Revision

Proponent(s): Stacey McKinney

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 19 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

▼ID	Item	Reason	Proposed Change	Committee Status
1217	AWPA A22 17	**Stacey McKinney:** No known issues with the existing standard.	**Additional Comment:** Reaffirm without Revisions	

AWPA Standard A37-17

22F-P5-A37: Proposal to Revise A37 With Minor Changes

Proponent(s): Min Chen, Ryan Sturdivant

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 19 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

ID	▲Item	Reason	Proposed Change	Committee Status
1098	AWPA A37 17	**Min Chen:** No known issues with the existing standard.	**Additional Comment:** Reaffirm without Revisions	**Withdrawn by proponent prior to committee meeting.**
1095	AWPA A37 17 SECTION STANDARD FOR DETERMINATION OF QUATERNARY AMMONIUM COMPOUNDS IN WOOD AND WOOD TREATING SOLUTIONS BY POTENTIOMETRIC TITRATION USING SODIUM TETRAPHENYLBORATE	**Min Chen:** To match the actives listed in section 1.2	*STANDARD FOR DETERMINATION OF QUATERNARY AMMONIUM COMPOUNDS AND POLYMERIC BETAINE IN WOOD AND WOOD TREATING SOLUTIONS BY POTENTIOMETRIC TITRATION USING SODIUM TETRAPHENYLBORATE*	

1096	AWPA A37 17 SECTION 1.1	**Min Chen:** To match actives listed in section 1.2.	**1.1** This method can be used to determine concentrations of quaternary ammonium compounds (quats) and polymeric betaine in wood and ACQ treating solutions. It is intended for routine quality control in wood treating and is not suitable for trace levels of quats in wood or treating solutions.	
1097	AWPA A37 17 SECTION 8.1 PARA 1	**Min Chen:** To match actives listed in section 1.2.	**Method A – Determination of Quats and Polymeric Betaine in Wood**	
1223	AWPA A37 17 SECTION 10.5	**Ryan Sturdivant:** The addition of HCl to DPAB samples is a preparation step and should therefore be in the section rather than in note 5.	**10.5** Prepare sample solutions by adding approximately 95 ml of deionized water and 5.00 ml of sample extract to a titration beaker. Test samples containing DPAB must be adjusted with 0.1 N HCl to pH 3 prior to the titration. **Note 5:** Standard aliquot size for wood extracts was set at 5.00 ml since increasing the amount of ethanol can affect the solubility of the precipitate being formed and also because ethanol can diminish the life of surfactant electrodes. ~~Test samples containing DPAB must be adjusted with 0.1 N HCl to pH 3 prior to the titration.~~	
1224	AWPA A37 17 SECTION 12.0	**Ryan Sturdivant:** Delete Section 12.0 and 12.1 retaining Method B header. Precision statement is found in section 15 and this section is no longer needed.	~~**12.0 Precision Statement:**~~ ~~**12.1** A precision statement will be written based on the outcome of an upcoming interlaboratory study.~~ ~~**Method B – Determination of Quats in ACQ Solutions**~~	
1225	AWPA A37 17 SECTION 13.0	**Ryan Sturdivant:** Renumbering due to removal of section 12.	**12~~3~~.0 Titration of Treating Solutions:**	
1275	AWPA A37 17 SECTION 13.0	**AWPA Staff:** Ryan Sturdivant intended to leave this header when he deleted the item 12.0 and 12.1 with proposal id 1224. That proposal included the deletion of the Method B Header, so have added it back with this proposal.	**Method B – Determination of Quats in ACQ Solutions**	
1226	AWPA A37 17 SECTION 14.0	**Ryan Sturdivant:** Renumber section and subsection due to removal of section 12.	**1~~4~~3.0 Calculations:**	
1227	AWPA A37 17 SECTION 15.0	**Ryan Sturdivant:** Renumbering due to removal of section 12.	**14~~5~~.0 Precision Statement:**	
1228	AWPA A37 17 SECTION 16.0	**Ryan Sturdivant:** Renumbering due to removal of section 12.	**15~~6~~.0 References:**	

AWPA Standard A48-22

22F-P5-A48: Proposal to Revise A48 With New Section 11

Proponent(s): Steven Jang

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 19 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

<table>
<tr><th>▼ID</th><th>Item</th><th>Reason</th><th>Proposed Change</th><th>Committee Status</th></tr>
<tr>
<td>1094</td>
<td>AWPA A48 22 SECTION FOOTNOTES PARA 1</td>
<td>Steven Jang: Update with the precision statement.</td>
<td>
11. Precision Statement: The following statements and tables should be used to judge the acceptability of an analysis using the described method and conditions below. The precision data were developed following ASTM E691 using 6 laboratories, 3 samples and 3 replicates.

11.1 Repeatability: Duplicate determination on the same sample by different operators in different laboratories should not be suspect at the 95% confidence level, if they do not differ from one another by equal to or less than the limiting weight percent levels shown in the following tables.

11.2 Reproducibility: Duplicate determination on the same sample by the same operator using the same equipment should not be suspect at the 95% confidence level, if they do not differ from one another by equal to or less than the limiting weight percent shown in the following tables.

Table 1. Precision Table for Propiconazole
<table>
<tr><th>Sample Type</th><th>Concentration, wt %</th><th>Repeatability (r)</th><th>Reproducibility (R)</th></tr>
<tr><td>Treating Solution</td><td>0.0166</td><td>0.0015</td><td>0.0035</td></tr>
<tr><td></td><td>0.0252</td><td>0.0015</td><td>0.0053</td></tr>
<tr><td></td><td>0.0338</td><td>0.0028</td><td>0.0077</td></tr>
<tr><td>Treated Wood</td><td>0.0196</td><td>0.0017</td><td>0.0048</td></tr>
<tr><td></td><td>0.0305</td><td>0.0044</td><td>0.0070</td></tr>
<tr><td></td><td>0.0405</td><td>0.0043</td><td>0.0055</td></tr>
</table>
Table 2. Precision Table for Tebuconazole
<table>
<tr><th>Sample Type</th><th>Concentration, wt %</th><th>Repeatability (r)</th><th>Reproducibility (R)</th></tr>
<tr><td>Treating Solution</td><td>0.0162</td><td>0.0018</td><td>0.0075</td></tr>
<tr><td></td><td>0.0274</td><td>0.0011</td><td>0.0060</td></tr>
</table>
</td>
<td></td>
</tr>
</table>

	0.0361	0.0027	0.0105
Treating Wood	0.0204	0.0023	0.0082
	0.0303	0.0032	0.0074
	0.0405	0.0052	0.0086

Table 3. Precision Table for Imidacloprid

Sample Type	**Concentration, wt %**	**Repeatability (r)**	**Reproducibility (R)**
Treating Solution	0.0018	0.0001	0.0003
	0.0027	0.0001	0.0005
	0.0036	0.0003	0.0008
Treated Wood	0.0023	0.0006	0.0016
	0.0036	0.0008	0.0018
	0.0051	0.0015	0.0022

AWPA Standard A52-17

22F-P5-A52: Proposal to Reaffirm A52 Without Revision

Proponent(s): Stacey McKinney

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 19 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

▼ID	Item	Reason	Proposed Change	Committee Status
1101	AWPA A52 17	**Stacey McKinney:** No known issues with the existing standard.	**Additional Comment:** Reaffirm without Revisions	

AWPA Standard A53-17

22F-P5-A53: Proposal to Reaffirm A53 Without Revision

Proponent(s): Stacey McKinney

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 19 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

▼ID	Item	Reason	Proposed Change	Committee Status
1218	AWPA A53 17	**Stacey McKinney:** No known issues with the existing standard.	**Additional Comment:** Reaffirm without Revisions	

AWPA Standard A54-17

22F-P5-A54: Proposal to Revise A54 With Precision Statement Clarification

Proponent(s): Juliet Tang

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 19 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

ID	▲Item	Reason	Proposed Change	Committee Status
1219	AWPA A54 17	**Stacey McKinney:** No known issues with the existing standard.	**Additional Comment:** Reaffirm without Revisions	**Withdrawn: Not needed with accepted revision.**
1273	AWPA A54 17 SECTION 9.2 PARA 3	**Juliet Tang:** Clarification	**Reproducibility.** The values reported by each of two laboratories should not be considered suspect unless they differ by more than ± 0.38% xylene insoluble. **9.3.** No precision statement based on ASTM E691 has yet been developed for this standard.	

AWPA Standard A55-17

22F-P5-A55: Proposal to Revise A55 Section 4.1 Note

Proponent(s): Nelson Wanggui

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 19 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

ID	▲Item	Reason	Proposed Change	Committee Status
1220	AWPA A55 17	**Stacey McKinney:** No known issues with the existing standard.	**Additional Comment:** Reaffirm without Revisions	**Withdrawn by proponent prior to committee meeting.**
1141	AWPA A55 17 SECTION 4.1 PARA 1	**Nelson Wanggui:** This standard is a general method for determination of the Specific Gravity of Oil-Type Preservatives. The range 1.000 to 1.150 is not wide enough to cover all oil-type preservatives. Non-Metal type, such as Penta or DCOI, should have lower than 1.000 gravity. P5 Committee should discuss what range should be set in this standard to cover all oil-type preservatives.	Note: If not available, hydrometers (60/60F) in the range 1.000 to 1.150 of similar accuracy and having a scale length not less than 9.5 mm. per 0.010 units of specific gravity may be used. If the gravity of the sample is outside of this range (1.000 to 1.150), other hydrometers having similar accuracy and covering the specific gravity should be used.	

AWPA Standard A57-17

22F-P5-A57: Proposal to Reaffirm A57 Without Revision

Proponent(s): Nelson Wanggui

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 19 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

▼ID	Item	Reason	Proposed Change	Committee Status
1139	AWPA A57 17	**Nelson Wanggui:** No known issues with the existing standard.	**Additional Comment:** Reaffirm without Revisions	

AWPA Standard A58-17

22F-P5-A58: Proposal to Withdraw A58 Without Prejudice

Proponent(s): Stacey McKinney

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 19 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

▼ID	Item	Reason	Proposed Change	Committee Status
1216	AWPA A58 17	**Stacey McKinney:** The requirement for conformance to gravity of fractions was removed for P1, P2 so no need for this method.	**Additional Comment:** Withdraw Standard	

AWPA Standard A59-17

22F-P5-A59: Proposal to Revise A59 Section 6.7 With Minor Change

Proponent(s): Nelson Wanggui

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 19 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

▼ID	Item	Reason	Proposed Change	Committee Status
1105	AWPA A59 17 SECTION 6.7	**Nelson Wanggui:** make the procedure more clear.	**6.7** Titrate the ammonium borate solution so formed with standardized 0.2 N sulfuric acid until the color changes from dark blue to yellow. Record the volume (to the nearest 0.01 mL) of 0.2 N sulfuric acid used.	

AWPA Standard A60-17

22F-P5-A60: Proposal to Withdraw A60 Without Prejudice for Lack of Use

Proponent(s): Nelson Wanggui

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 19 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

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▼ID	Item	Reason	Proposed Change	Committee Status
1214	AWPA A60 17	**Nelson Wanggui:** No known issues with the existing standard. Lack of use	**Additional Comment:** Withdraw Standard	

AWPA Standard A61-17

22F-P5-A61: Proposal to Withdraw A61 Without Prejudice for Lack of Use

Proponent(s): Nelson Wanggui

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 19 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

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▼ID	Item	Reason	Proposed Change	Committee Status
1213	AWPA A61 17	**Nelson Wanggui:** No known issues with the existing standard. Lack of use	**Additional Comment:** Withdraw Standard	

AWPA Standard A62-17

22F-P5-A62: Proposal to Revise A62 Multiple Sections with Minor Change

Proponent(s): Jeff Morrell

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Recirculation ballot required with 19 Yes, 1 No, and 0 Abstain after negative resolution process.

Recirculation Ballot Results: Passed as SUBMITTED with 20 Yes, 1 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

ID	▲Item	Reason	Proposed Change	Committee Status
1131	AWPA A62 17 SECTION STANDARD METHOD TO DETERMINE THE PH OF WATERBORNE TREATING SOLUTIONS	**Jeff Morrell:** consistency- current version refers to waterborne wood preservative solutions, wood preservative treating solutions and treating solution	*STANDARD METHOD TO DETERMINE THE PH OF WATERBORNE WOOD PRESERVATIVE TREATING SOLUTIONS*	
1132	AWPA A62 17 SECTION 5.1	**Jeff Morrell:** consistent language	**5.1** pH buffer calibration standards which bracket the estimated pH of the waterborne wood preservative treating solution.	
1134	AWPA A62 17 SECTION 6.1	**Jeff Morrell:** consistency	**6.1** The waterborne wood preservative treating solution~~sample~~ should be taken in such a manner as to ensure it uniformly represents a sub-part of the entire material to be tested.	
1133	AWPA A62 17 SECTION 6.2	**Jeff Morrell:** consistent language	**6.2** Calibrate the electrode system using fresh pH buffer calibration standards while slowly stirring the solutions. Rinse the electrodes and temperature compensation probe with distilled or deionized water and gently dab with a paper wipe between pH buffer calibration standard~~solutions~~. The pH of the buffer calibration solutions should bracket the pH range of interest and be within 2°C of the temperature of the waterborne wood preservative treating~~test~~ solutions.	
1135	AWPA A62 17 SECTION 6.3	**Jeff Morrell:** To make sure the reference is to the standard pH	**6.3** Check the calibration by measuring the pH of the pH buffer calibration standards~~olutions~~. The readings should be within 0.05 pH units of their listed ~~standard buffer~~ values.	
1136	AWPA A62 17 SECTION 6.4	**Jeff Morrell:** consistent language	**6.4** The pH of the waterborne wood preservative treating solution shall be measured at the concentration used to achieve the required treatment performance and at the same~~a~~ temperature used to measure the buffer calibration standards~~of~~ (20 to 30°C).	
1137	AWPA A62 17 SECTION 6.5	**Jeff Morrell:** consistent language	**6.5** Immerse the electrodes into the waterborne wood preservative treating solution and slowly stir. Allow time for the reading to stabilize and record the pH value.	
1138	AWPA A62 17 SECTION 8.1	**Jeff Morrell:** consistent terms	**8.1** Report the pH value of the waterborne wood preservative treating solution.	

AWPA Standard A63-17

22F-P5-A63: Proposal to Reaffirm A63 Without Revision

Proponent(s): Nelson Wanggui

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 20 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

▼ID	Item	Reason	Proposed Change	Committee Status
1255	AWPA A63 17	**Nelson Wanggui:** No known issues with the existing standard.	**Additional Comment:** Reaffirm without Revisions	

AWPA Standard A66-17

22F-P5-A66-MOD: Proposal to Revise A66 With Minor Changes

Proponent(s): Nelson Wanggui, Juliet Tang

Committee Meeting Action: Unanimously authorized for letter ballot as MODIFIED.

Letter Ballot Results: Passed unanimously as MODIFIED with 20 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

ID	▲Item	Reason	Proposed Change	Committee Status
1265	AWPA A66 17 SECTION 6.1	**Nelson Wanggui:** Weight is needed for quantitative determination and calculation in 7.1	**6.1** **Weigh the treated**~~Treated~~ wood samples (to the near 0.1 mg) and the samples should be prepared according to Standard A7, "Standard Wet Ashing Procedures for Preparing Wood for Chemical Analysis".	
1266	AWPA A66 17 SECTION 6.2	**Nelson Wanggui:** Weight is needed for quantitative detemination and calculation in section 7.1	**6.2** Weigh the solution sample (to the nearest 0.1 mg) and place ~~Place~~ the sample in a 500 ml Erlenmeyer flask and add sufficient water to make a total volume of about 200 ml.	

<table>
<tr><th></th><th></th><th></th><th></th><th></th></tr>
<tr><td>1268</td><td>AWPA A66 17 SECTION 7.1 PARA 1</td><td>Nelson Wanggui: The factor of 0.6668 should be revised to 0.6798, which was calculated from: (2* CrO3 MW 100)/Potassium dichromate (K2Cr2O7 MW 294.2) = 200/294.2 = 0.6798</td><td>

$$\%CrO_3 = \frac{(\text{Difference in Titrations in ml})(0.6668)(\text{Aliquot Factor})}{\text{Grams of Sample}}$$

$$CrO_3, retention = \frac{(\%CrO_3)(\text{wood density})}{100}$$

$$\%CrO_3 = \frac{(Difference\ in\ Titrations\ in\ ml)(0.6798)(Aliquot\ Factor)}{Grams\ of\ Sample}$$

$$CrO_3\ retention = \frac{(\%CrO_3)(wood\ density)}{100}$$

</td><td>Withdrawn by proponent in committee meeting before motion.</td></tr>
<tr><td>1274</td><td>AWPA A66 17 SECTION 9.1 [Table Data]</td><td>Juliet Tang: Clarification</td><td>
PRECISION TABLE FOR CrO_3 BY ANALYZING CCA IN SOLUTION
<table>
<tr><th>Element</th><th>Expressed as Oxide</th><th>Solution Oxide Concentration Level (%)</th><th>Limiting Percentages Repeatability</th><th>Limiting Percentages Reproducibility</th></tr>
<tr><td>Chromium</td><td></td><td>0 to 0.95</td><td>.021</td><td>.045</td></tr>
<tr><td>Chromium</td><td>CrO_3</td><td>0.96 to 2.50</td><td>.027</td><td>.040</td></tr>
<tr><td>Chromium</td><td></td><td>2.51 to 4.00</td><td>.041</td><td>.121</td></tr>
</table>
9.2 No precision statement based on ASTM E691 has yet been developed for this standard.
</td><td></td></tr>
</table>

AWPA Standard A69-18

22F-P5-A69: Proposal to Revise A69 With Note on Section 6

Proponent(s): Ryan Sturdivant

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 20 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

ID	▲Item	Reason	Proposed Change	Committee Status
1229	AWPA A69 18	**Ryan Sturdivant:**	**6.2** Comments: Chrome Azurol S has approximately the same sensitivity as Rubeanic Acid [AWPA Standard A72] at approximately 25ppm copper. Chrome Azurol S is the preferred	

	SECTION 6.1	This comment is listed in A72, but was omitted from A69. It is a beneficial note for both standards.	reagent for freshly treated wood because of its stronger reaction. Rubeanic Acid is, however, more specific to copper and is less subject to interference reactions. Therefore, it is the preferred reagent for measuring copper penetration in treated wood that has been in service for some time in ground contact or when signs of decay are present.	
1230	AWPA A69 18 SECTION 9.0	**Ryan Sturdivant:** Reference added for comment added to A69 section 6.	**10.0 References:** **1.** Jin, L. Brown, K. Zahora, A. Archer, K. 2014.'Are the Copper Color Indicators Still Working After Copper Tolerant Fungal Attack?' *Proceedings of the American Wood Preservers' Association.* Newport Beach, CA. May 4-6, 2014	

AWPA Standard A93-19

22F-P5-A93: Proposal to Revise A93 With Major Changes to Multiple Sections

Proponent(s): Jacob McBrayer

Committee Meeting Action: Unanimously authorized for letter ballot as MODIFIED.

Letter Ballot Results: Passed unanimously as MODIFIED with 18 Yes, 0 No, and 1 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

ID	▲Item	Reason	Proposed Change	Committee Status
1276	AWPA A93 19 SECTION 2.1	**Jacob McBrayer:** Rubeanic acid is the only indicator currently used with the machine vision technology. Proposal above is to indicate that within the standard. This proposal will help improve the current preservative penetration standards per the T2 instruction from the AWPA Executive Committee. Machine vision technology will be used to objectively, accurately, and consistently analyze penetration of wood cores. It will take our subjective method of penetration determination and turn it into a quantitative, unbiased assessment. This proposal will serve to implement this technology in commercial wood treating plants and subsequently increase confidence in the quality of the end product. Please refer to the supporting information document for further clarification.	**2.1** AWPA standards use color to determine the penetration pattern of preservatives or penetration surrogates and, in some cases, to identify the presence of heartwood. Proper penetration is a key part of the long-term performance of treated wood products, and color allows penetration to be verified. This standard seeks to define a standardized method for quantifying the extent of penetration by using color machine vision with rubeanic acid (AWPA A72) acting as the penetration indicator. A color machine vision system has the ability to classify penetration by learning color profiles and using the learned profile to analyze samples. Attachment(s): *Supporting Information Doc.pdf*	**Modified by proponent in committee meeting before motion:** Added "(AWPA A72)" to proposed text.
1317	AWPA A93 19 SECTION 3.6.4	**Jacob McBrayer:** The new design of the core tray is an integral part of the machine vision system, and this proposal describes the tray itself, maintenance, and instructions for use that are best practices with use of machine vision. This proposal will help improve the current preservative penetration standards per the T2 instruction from the AWPA Executive Committee. Machine vision technology will be used to objectively, accurately, and consistently analyze penetration of wood cores. It will take our subjective method of penetration determination and turn it into a quantitative, unbiased assessment. This proposal will serve to implement this	**3.7** Core Tray. **3.7.1** The machine vision system should include a specialized tray to hold the cores to be evaluated. The tray should include cut-marks for minimum penetration depth requirements as well as applicable assay zone cut-marks. It is good practice to cut the cores to the minimum penetration depth requirement and remove excess portions of the core prior to evaluation. Heartwood/sapwood indicator and rubeanic acid can be applied directly to the cores on the tray. Care should be taken to keep the outside of the tray clean and free of excess liquid or dust. Additionally, the user should pat down the sprayed cores and attempt to remove any excess, pooled	

		technology in commercial wood treating plants and subsequently increase confidence in the quality of the end product. Please refer to the supporting information document attached to the earlier proposal in this standard.	indicator as well as wood dust/fragments prior to placing the tray into the machine. Having followed these recommendations, the user should place the tray into the machine vision enclosure. After each charge, the tray should be rinsed with running water, and the cut-marks should be scrubbed with a wire brush to remove any chemical residue from the tray. Once every twenty-four hours, a tray in use should be left to soak in a 1:10 bleach to water solution for at least one hour and then scrubbed with a wire brush for maintenance. If the machine vision system is unable to identify every core on a tray, it could be because the tray is unclean. If so, the user should immediately soak the tray in the bleach/water solution for at least one hour, scrub, and re-evaluate the tray cleanliness. Attachment(s): *Supporting Information Doc.pdf*	
1318	AWPA A93 19 SECTION 3.6.4	**Jacob McBrayer:** The validation cards are now an integral part of the machine vision system. This proposal describes the design and use-case for the validation cards to accompany the system. This proposal will help improve the current preservative penetration standards per the T2 instruction from the AWPA Executive Committee. Machine vision technology will be used to objectively, accurately, and consistently analyze penetration of wood cores. It will take our subjective method of penetration determination and turn it into a quantitative, unbiased assessment. This proposal will serve to implement this technology in commercial wood treating plants and subsequently increase confidence in the quality of the end product. Please refer to the supporting information document attached to the earlier proposal in this standard.	**3.8** Validation Cards. **3.8.1** The machine vision system should include a set of validation cards, provided by the machine vision manufacturer, to be used to validate the calibration of a machine vision system. These validation cards ensure the machine vision system is accurate and reliable. The individual validation cards have visual representations of cores with known values of treated sapwood, untreated sapwood, and heartwood. If the machine vision system correctly identifies all the individual cores and the total treated sapwood percentage is within ±3% of the assigned value, the machine is operational and can be used to evaluate penetration. **3.8.2** The software should be programmed to automatically alert the user when the validation card(s) are read outside the allowable limits. **3.8.3** The software should not allow routine measurements to be made when the validations card(s) results are outside of the allowable limits. **3.8.4** Care should be taken to keep the validation cards free of any liquid or debris. If a validation card becomes damaged or unusable, it should be replaced accordingly. Attachment(s): *Supporting Information Doc.pdf*	
1337	AWPA A93 19 SECTION 3.6.4	**AWPA Staff:** Consolidate from 1317 & 1318	**3.7** Core Tray. **3.7.1** The machine vision system should include a specialized tray to hold the cores to be evaluated. The tray should include cut-marks for minimum penetration depth requirements as well as applicable assay zone cut-marks. It is good practice to cut the cores to the minimum penetration depth requirement and remove excess portions of the core prior to evaluation. Heartwood/sapwood indicator and rubeanic acid can be applied directly to the cores on the tray. Care should be taken to keep the outside of the tray clean and free of excess liquid or dust. Additionally, the user should pat down the sprayed cores and attempt to remove any excess, pooled indicator as well as wood dust/fragments prior to placing the tray into the machine. Having followed these recommendations, the user should place the tray into the machine vision enclosure. After each charge, the tray should be rinsed with running water, and the cut-marks should be scrubbed with a wire brush to remove any chemical residue from the tray. Once every twenty-four hours, a tray in use should be left to soak in a 1:10 bleach to water solution for at least one hour and then scrubbed with a wire brush for maintenance. If the machine vision system is unable to identify every core on a tray, it could be because the tray is unclean. If so, the user should immediately soak the tray in the	

			bleach/water solution for at least one hour, scrub, and re-evaluate the tray cleanliness. **3.8** Validation Cards. **3.8.1** The machine vision system should include a set of validation cards, provided by the machine vision manufacturer, to be used to validate the calibration of a machine vision system. These validation cards ensure the machine vision system is accurate and reliable. The individual validation cards have visual representations of cores with known values of treated sapwood, untreated sapwood, and heartwood. If the machine vision system correctly identifies all the individual cores and the total treated sapwood percentage is within ±3% of the assigned value, the machine is operational and can be used to evaluate penetration. **3.8.2** The software should be programmed to automatically alert the user when the validation card(s) are read outside the allowable limits. **3.8.3** The software should not allow routine measurements to be made when the validations card(s) results are outside of the allowable limits. **3.8.4** Care should be taken to keep the validation cards free of any liquid or debris. If a validation card becomes damaged or unusable, it should be replaced accordingly.	
1319	AWPA A93 19 SECTION 4.1.1	**Jacob McBrayer:** Standard updating to reference the current AWPA Standard This proposal will help improve the current preservative penetration standards per the T2 instruction from the AWPA Executive Committee. Machine vision technology will be used to objectively, accurately, and consistently analyze penetration of wood cores. It will take our subjective method of penetration determination and turn it into a quantitative, unbiased assessment. This proposal will serve to implement this technology in commercial wood treating plants and subsequently increase confidence in the quality of the end product. Please refer to the supporting information document attached to the earlier proposal in this standard.	**4.1.1** A wood sample for analysis will normally consist of cores taken in accordance with the provisions of AWPA Standards T1 and M25.	
1320	AWPA A93 19 SECTION 4.1.1.1	**Jacob McBrayer:** Updating Standard to reference the current AWPA standards This proposal will help improve the current preservative penetration standards per the T2 instruction from the AWPA Executive Committee. Machine vision technology will be used to objectively, accurately, and consistently analyze penetration of wood cores. It will take our subjective method of penetration determination and turn it into a quantitative, unbiased assessment. This proposal will serve to implement this technology in commercial wood treating plants and subsequently increase confidence in the quality of the end product. Please refer to the supporting information document attached to the earlier proposal in this standard.	**4.1.1.1** Regardless of the presence of heartwood, all cores shall be cut to the length specified in AWPA Standards T1 and M25 for penetration analysis.	
1321	AWPA A93 19 SECTION 4.1.2	**Jacob McBrayer:** All cores should now be sprayed with heartwood/sapwood indicators and/or penetration indicators. Proposal change to reflect that. This proposal will help improve the current preservative penetration standards per the T2 instruction from the AWPA Executive Committee. Machine vision technology will be used to objectively, accurately, and consistently analyze penetration of wood cores. It will take our subjective method of penetration determination and turn it into a quantitative, unbiased assessment. This proposal will serve to implement this technology in commercial wood treating plants and subsequently increase	**4.1.2** ~~If applicable, c~~Cores shall be sprayed with the appropriate heartwood/sapwood indicators and/or penetration indicators.	

		confidence in the quality of the end product. Please refer to the supporting information document attached to the earlier proposal in this standard.		
1322	AWPA A93 19 SECTION 4.1.2.1	**Jacob McBrayer:** Re-ordering proposal to ensure that the proper face of the cores are presented for machine vision analysis. This proposal will help improve the current preservative penetration standards per the T2 instruction from the AWPA Executive Committee. Machine vision technology will be used to objectively, accurately, and consistently analyze penetration of wood cores. It will take our subjective method of penetration determination and turn it into a quantitative, unbiased assessment. This proposal will serve to implement this technology in commercial wood treating plants and subsequently increase confidence in the quality of the end product. Please refer to the supporting information document attached to the earlier proposal in this standard.	**4.1.2.2** Cores shall be aligned in the core tray as described in M25 Section 6.4.1.3 with the best colored side facing upward.	**Modified by proponent in committee meeting before motion:** Added "as described in M25 Section 6.4.1.3" to proposed text.
1323	AWPA A93 19 SECTION 4.2.1	**Jacob McBrayer:** Item deleted and re-positioned in the previous section	~~**4.2.1** Cores shall be placed in a presentation tray with the best colored side facing upward.~~	
1330	AWPA A93 19 SECTION 4.2.2	**Jacob McBrayer:** Re-order needed. Also, the color of the cores will fade over time and may cause the machine vision unit to mis-classify the charge. This proposal will help improve the current preservative penetration standards per the T2 instruction from the AWPA Executive Committee. Machine vision technology will be used to objectively, accurately, and consistently analyze penetration of wood cores. It will take our subjective method of penetration determination and turn it into a quantitative, unbiased assessment. This proposal will serve to implement this technology in commercial wood treating plants and subsequently increase confidence in the quality of the end product. See the supporting information document attached in an earlier proposal for further clarification.	~~**4.2.2**~~**4.2.1** The presentation tray shall be placed inside the machine vision system for imaging and analysis within 10 minutes of being sprayed with penetration indicator. ~~The presentation tray shall be placed inside the machine vision system for imaging and analysis.~~	
1285	AWPA A93 19 SECTION 4.2.3	**Jacob McBrayer:** Proposal to account for necessary calibration of machine vision unit. This section will support treaters that use the machine vision system. This proposal will help improve the current preservative penetration standards per the T2 instruction from the AWPA Executive Committee. Machine vision technology will be used to objectively, accurately, and consistently analyze penetration of wood cores. It will take our subjective method of penetration determination and turn it into a quantitative, unbiased assessment. This proposal will serve to implement this technology in commercial wood treating plants and subsequently increase confidence in the quality of the end product. Please refer to the supporting information document for further clarification.	**4.3** Machine Spatial Calibration. **4.3.1** At least once every 24 hours, the machine should be calibrated using a calibration chart which ensures there has been no adverse change to the lighting. The software should alert the user a calibration is needed.	
1331	AWPA A93 19 SECTION 4.2.3	**Jacob McBrayer:** Re-ordering this section of the standard	~~**4.2.3**~~ **4.2.2** Computer software with specifications described in Section 3 shall be used to complete the analysis. ~~Computer software with specifications described in Section 3 shall be used to complete the analysis.~~	
1286	AWPA A93 19 SECTION 5.1	**Jacob McBrayer:** Total sapwood treated percentage needs to be included in the report. Proposal needed to reflect this needed change. This proposal will help improve the current preservative penetration standards per the T2 instruction from the AWPA Executive Committee. Machine vision technology will be used to objectively, accurately, and	**5.1** The percent of penetration for each core and a total treated sapwood percentage shall be determined and reported by the system.	

		consistently analyze penetration of wood cores. It will take our subjective method of penetration determination and turn it into a quantitative, unbiased assessment. This proposal will serve to implement this technology in commercial wood treating plants and subsequently increase confidence in the quality of the end product. Please refer to the supporting information document for further clarification.		
1287	AWPA A93 19 SECTION 5.2.1	**Jacob McBrayer:** Calculation for total sapwood percentage is needed. Proposal is needed to account for this needed addition. This section will support treaters that use machine vision systems. This proposal will help improve the current preservative penetration standards per the T2 instruction from the AWPA Executive Committee. Machine vision technology will be used to objectively, accurately, and consistently analyze penetration of wood cores. It will take our subjective method of penetration determination and turn it into a quantitative, unbiased assessment. This proposal will serve to implement this technology in commercial wood treating plants and subsequently increase confidence in the quality of the end product. Please refer to the supporting information document for further clarification.	**5.2.1** The pixels identified as properly treated wood shall be divided by the total pixels for each core excluding, if applicable, any pixels identified as heartwood. The same calculation shall occur for all pixels for the entirety of the charge.	
1326	AWPA A93 19 SECTION 5.3	**Jacob McBrayer:** Change is needed to represent the new standard for total sapwood treated percentage now that this standard is quantitative. Also changing to reflect new AWPA standards. This proposal will help improve the current preservative penetration standards per the T2 instruction from the AWPA Executive Committee. Machine vision technology will be used to objectively, accurately, and consistently analyze penetration of wood cores. It will take our subjective method of penetration determination and turn it into a quantitative, unbiased assessment. This proposal will serve to implement this technology in commercial wood treating plants and subsequently increase confidence in the quality of the end product. Please refer to the supporting information document for further clarification.	~~**5.3**~~**5.3** A treated sapwood percentage shall be determined for each core and a pass/fail decision for the overall core tray shall be determined and shall be based on the requirements of AWPA Standards T1 and M25. ~~A pass/fail decision for each core and the overall core tray shall be determined and shall be based on the requirements of AWPA Standards T1 and M2.~~	
1289	AWPA A93 19 SECTION 6.0 PARA 1	**Jacob McBrayer:** standard is now quantitative. The information in this standard acts as a precision statement until such a time where a ASTM E691 report can be completed. The machine's limitations to identify copper in lower concentrations within latewood bands is also addressed in this standard as well. This proposal will help improve the current preservative penetration standards per the T2 instruction from the AWPA Executive Committee. Machine vision technology will be used to objectively, accurately, and consistently analyze penetration of wood cores. It will take our subjective method of penetration determination and turn it into a quantitative, unbiased assessment. This proposal will serve to implement this technology in commercial wood treating plants and subsequently increase confidence in the quality of the end product. Please refer to the supporting information document for further clarification.	**6.1** Using four validation cards to compare data on two machine vision units, it can be said the machines are repeatable and reproduceable with all individual core treated sapwood standard deviations less than 2.5%. Moreover, the highest coefficient of variation for any single core was 9.2%. The total treated sapwood percentage for the entirety of the charges were even more aligned where all runs were within 1%. Treated sapwood can be accurately identified at copper concentrations equal to or greater than 250 ppm (mg Copper, as Cu metal, per kg of wood dust) in latewood bands. The minimum threshold for treated sapwood detection in early wood bands is less than 90 ppm.	

American Wood Protection Association
Protecting Wood Since 1904

AWPA Technical Committee P-6
Fall 2022 Standardization Cycle

Ballot Opening/Closing Dates:	10/17/2022 to 11/16/2022
Items Subject to Recirculation:	N/A
Recirculation Ballot Opening/Closing:	N/A
Total Number Committee Members:	27
Number of Eligible Voters:	27
Number of Eligible Ballots Received:	22
Ballot Return Percentage:	81.5%
Deadline for Appeals:	N/A – No Unresolved Objections

AWPA Standard E1-17

22F-P6-E1: Proposal to Revise E1 With Changes to Multiple Sections

Proponent(s): Juliet Tang

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 21 Yes, 0 No, and 1 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

ID	▲Item	Reason	Proposed Change	Committee Status
1329	AWPA E1 17 SECTION LABORATORY METHODS FOR EVALUATING THE TERMITE RESISTANCE OF WOOD BASED MATERIALS: CHOICE AND NO CHOICE TESTS	**AWPA Staff:** View final version with all changes	**Additional Comment:** The task group has put forward some extensive changes to the standard that show up on the Standards Development Portal. Overall, most the changes were organizational to make the standard easier to read and have more logic to its flow. On the portal, the changes are probably very hard to follow, so attached is a copy of how the standard would read with all the changes accepted. We hope this makes it easier to understand the changes that are proposed. Attachment(s): *AWPA E1 with all changes.pdf*	
1143	AWPA E1 17 SECTION 1.3 [Table Data]	**Juliet Tang:** TG	Section Outline of Method 2 Apparatus and Material 3	

			~~Determination of Sand Water-Holding Capacity~~Collection of Termites 4 Test Specimens 5 Procedure 6 Assessment of Results 7 Interpretation of Results 8 Additional Commentary 9	
1144	AWPA E1 17 SECTION 2.2	**Juliet Tang:** TG	**2.2** The two-choice test procedure. As described below, each replicate container contains damp sand, termites, and two test blocks - normally a treatment block and an untreated or preferably ~~(~~solvent-treated~~)~~ control block. This procedure is useful for determining whether materials are repellent to termites when other choices are available, as is the case in most field situations; or whether the toxicity is sufficient to deter termite feeding when that feeding is not limited to the single toxic material.	
1145	AWPA E1 17 SECTION 2.2	**Juliet Tang:** TG	**2.2** The two-choice test procedure. As described below, each replicate container contains damp sand, termites, and two test blocks - normally a treatment block and an untreated or (solvent-treated) control block. This procedure is useful for determining whether materials are repellent to termites when other choices are available, as is the case in most real world environments~~field situations~~; or whether the toxicity is sufficient to deter termite feeding when that feeding is not limited to the single toxic material.	
1338	AWPA E1 17 SECTION 2.2	**AWPA Staff:** Consolidate from1144 & 1145	**2.2** The two-choice test procedure. As described below, each replicate container contains damp sand, termites, and two test blocks - normally a treatment block and an untreated or preferably ~~(~~solvent-treated~~)~~ control block. This procedure is useful for determining whether materials are repellent to termites when other choices are available, as is the case in most real world environments~~field situations~~; or whether the toxicity is sufficient to deter termite feeding when that feeding is not limited to the single toxic material.	
1146	AWPA E1 17 SECTION 3.1.1	**Juliet Tang:** TG	~~**3.1.1** If volatile chemicals are to be tested, test samples should be conditioned prior to test (e.g., by evaporative aging) to aid in removal of volatile components. Conditioning methods must be reported with test data, as well as any preservative depletion from conditioning, as indicated by appropriate chemical analyses. Solvent-only control samples shall also be included in the test, and termite mortality in controls must be reported.~~	
1147	AWPA E1 17 SECTION 3.1.2	**Juliet Tang:** TG moved to 5.2.2	~~**3.1.2** If leachable chemicals are to be tested, test samples should be protected from contact with the sand by placement on a plastic or aluminum foil square exceeding the dimensions of the sample by approximately 3 mm (1/8 in.) on each side.~~	
1148	AWPA E1 17 SECTION 3.2	**Juliet Tang:** TG	**3.2** Test samples can be treated with various chemicals and retentions of interest or may be from other cellulosic material of interest. **3.3~~2~~** Screened, washed, heat-sterilized, silica sand, 150 g per container.	
995	AWPA E1 17 SECTION 3.3	**Juliet Tang:** Consistency.	**3.3** Distilled or deionized water~~, 30 ml~~ is added to the sand in each container 2 hours prior to placing test sample or termites in the container. See Section 4.1 for the amount of water to be used.	**Withdrawn by proponent prior to committee meeting.**
1149	AWPA E1 17 SECTION 3.3	**Juliet Tang:** TG. Amounts of water moved to 6.1.4.	**3.4~~3~~** Distilled or deionized water~~, 30 ml added to the sand in each container 2 hours prior to placing test sample or termites in the container~~.	
997	AWPA E1 17 SECTION 3.4	**Juliet Tang:** "spp." should not be in italics.	**3.4** Southern yellow pine (*Pinus* spp.) test samples should be cut as accurately as possible from kiln dried sapwood, providing blocks with smooth surfaces. The samples should measure 25 mm (1 inch) by 25 mm (1 inch) by 6 mm (1/4 inch) (r x t x l) or (r x l x t). The wood shall be free of sapstain chemicals, mold, stain, decay and insect attack with no visible defects, and have four to six rings per inch.	**Withdrawn by proponent prior to committee meeting.**
1150	AWPA E1 17 SECTION 3.4	**Juliet Tang:** TG. Redundant. Details already given in 5.0	~~**3.4** Southern yellow pine (*Pinus spp.*) test samples should be cut as accurately as possible from kiln dried sapwood, providing blocks with smooth surfaces. The samples should measure 25 mm (1 inch) by 25 mm (1 inch) by 6 mm (1/4 inch) (r x t x l) or (r x l x t). The wood shall be free of sapstain chemicals, mold, stain, decay and insect attack with no visible defects, and have four to six rings per inch.~~	
1151	AWPA E1 17 SECTION 3.4.1	**Juliet Tang:** TG. Redundant.	~~**3.4.1** Other wood species may be used, but in each separate test using other species as the major test wood, five southern yellow pine sapwood blocks should be used as additional controls to permit the correlation of test results among laboratories.~~	
1152	AWPA E1 17 SECTION 3.4.2	**Juliet Tang:** TG	~~**3.4.2** For testing of cellulosic composites, the material for testing should be selected from manufactured sheets or profiles that are representative of the tested material as used in service. When the composite is made by separate blending of the core and face materials (sometimes with different compositions), both regions of the composite should be tested. This also applies to thick wood composite when the heat history in the core and the faces are significantly different and when the heat history may have an influence on the performance of the preservative used. Samples shall be representative of the product in service with no large surface area glue-line exposure to termites.~~	
1000	AWPA E1 17 SECTION 3.5	**Juliet Tang:** I searched internet and could not find	**3.5** Subterranean termites in the genera *Reticulitermes*, *Coptotermes*, or *Heterotermes*. Test results obtained with a particular termite species may be applicable to other species and genera as well, but this cannot be assumed to be the case. Tests should emphasize the	

		any vendor currently selling and shipping subterranean termites.	use of termite species commonly encountered in the geographic region(s) of interest. *Reticulitermes flavipes* has a very broad geographic distribution in eastern North America ~~and is available commercially~~; *Reticulitermes hesperus* is found on the west coast; *Heterotermes aureus* is a common desert termite; and *Coptotermes formosanus* is found in Hawaii, the tropics and subtropics, and the southern states.	
1153	AWPA E1 17 SECTION 3.5	**Juliet Tang:** TG	**3.5** Subterranean termites in the genera *Reticulitermes*, *Coptotermes*, or *Heterotermes*. Test results obtained with a particular termite species may be applicable to other species and genera~~ as well~~, but this cannot be assumed to be the case. Tests should emphasize the use of termite species commonly encountered in the geographic region(s) of interest. *Reticulitermes flavipes* has a very broad geographic distribution in eastern North America and is available commercially; *Reticulitermes hesperus* is found on the west coast; *Heterotermes aureus* is a common desert termite; and *Coptotermes formosanus* is found in Hawaii, the tropics and subtropics, and the southern states.	
1339	AWPA E1 17 SECTION 3.5	**AWPA Staff:** Consolidate from 1000 & 1153	**3.5** Subterranean termites in the genera *Reticulitermes*, *Coptotermes*, or *Heterotermes*. Test results obtained with a particular termite species may be applicable to other species and genera~~ as well~~, but this cannot be assumed to be the case. Tests should emphasize the use of termite species commonly encountered in the geographic region(s) of interest. *Reticulitermes flavipes* has a very broad geographic distribution in eastern North America ~~and is available commercially~~; *Reticulitermes hesperus* is found on the west coast; *Heterotermes aureus* is a common desert termite; and *Coptotermes formosanus* is found in Hawaii, the tropics and subtropics, and the southern states.	
1154	AWPA E1 17 SECTION 3.5.1	**Juliet Tang:** TG. Redundant. Already appears in 4.1.	~~**3.5.1** If possible, the original date, place of termite collection, length of time in storage prior to the test and conditions of that storage, and species determination should be reported with the test data. A sample of termite soldiers and (if possible) the winged alate (swarmer) caste from each collection should be preserved in 70% ethanol, labeled with the date and place of collection, and either maintained by the testing laboratory or deposited in a recognized entomological collection at a public or government institution.~~	
1155	AWPA E1 17 SECTION 4.0	**Juliet Tang:** TG	**4.0 Collection of Termites~~Sand Moisture Content~~:**	
1156	AWPA E1 17 SECTION 4.1	**Juliet Tang:** TG	**4.1** ~~For *Coptotermes*, 30 ml of sterile water will be used to wet the 150 grams of sand used for the test or 20% MC. For *Reticulitermes*, 27 mls of sterile water can be used per 150 grams of sand or 18% MC.~~Subterranean termites, (e.g. Reticulitermes, Coptotermes, or Heterotermes) are collected from logs, stumps, buried containers of cellulosic materials near termite nests, or from wood or paper placed in the field as baits to aggregate foraging termites. If termites are taken from a laboratory culture, then culture maintenance conditions and the original date and place of collection must be reported with the test data. If possible, the original date, place of termite collection, length of time in storage prior to the test and conditions of that storage, and species determination should be reported with the test data. A sample of termite soldiers and (if possible) the winged alate (swarmer) caste from each collection should be preserved in 70% ethanol, labeled with the date and place of collection, and either maintained by the testing laboratory or deposited in a recognized entomological collection at a public or government institution.	**Withdrawn by proponent prior to committee meeting.**
1193	AWPA E1 17 SECTION 4.1	**Juliet Tang:** TG	**4.1** ~~For *Coptotermes*, 30 ml of sterile water will be used to wet the 150 grams of sand used for the test or 20% MC. For *Reticulitermes*, 27 mls of sterile water can be used per 150 grams of sand or 18% MC.~~Subterranean termites, (e.g. *Reticulitermes*, *Coptotermes*, or *Heterotermes*) are collected from logs, stumps, buried containers of cellulosic materials near termite nests, or from wood or paper placed in the field as baits to aggregate foraging termites. If termites are taken from a laboratory culture, then culture maintenance conditions and the original date and place of collection must be reported with the test data. If possible, the original date, place of termite collection, length of time in storage prior to the test and conditions of that storage, and species determination should be reported with the test data. A sample of termite soldiers and (if possible) the winged alate (swarmer) caste from each collection should be preserved in 70% ethanol, labeled with the date and place of collection, and either maintained by the testing laboratory or deposited in a recognized entomological collection at a public or government institution.	
1157	AWPA E1 17 SECTION 4.2	**Juliet Tang:** TG	**4.2** Termites should be separated from collection debris as described below, or by other methods commonly used in the test laboratory (must be described with data). ~~Collection of Termites~~	
1158	AWPA E1 17 SECTION 4.2.1	**Juliet Tang:** TG	~~**4.2.1** Subterranean termites, (e.g. *Reticulitermes, Coptotermes,* or *Heterotermes)* are collected from logs, stumps, buried containers of cellulosic materials near termite nests, or from wood or paper placed in the field as baits to aggregate foraging termites. If termites are taken from a laboratory culture, then culture maintenance conditions and the original date and place of collection must be reported with the test data. Termites should be separated from collection debris as described below, or by other methods commonly used in the test laboratory (must be described with data).~~	
1159	AWPA E1 17 SECTION 4.2.2	**Juliet Tang:** TG	**4.2.1~~2~~** Wood or paper collection materials are removed to the laboratory with termites and carefully broken open. The insects are shaken out onto a tray or trays. After distributing the debris and insects evenly on the tray(s), damp paper towels, sheets of Kraft paper, etc. are laid over the debris. The termites will cling to the damp paper after a few minutes.	

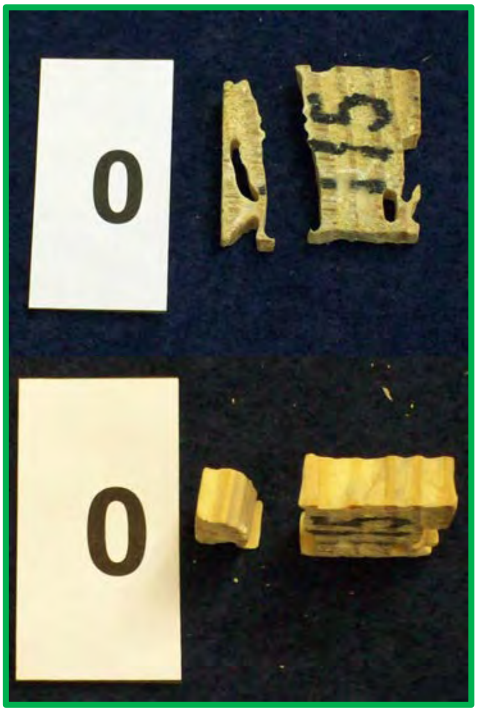
1160	AWPA E1 17 SECTION 4.2.3	**Juliet Tang:** TG	**4.2.2~~3~~** A 7 to 20 liter (2 to 5 gallon) pail is prepared by placing about 10 unfolded, slightly crumpled, damp paper towels in the bottom of the pail or similar container. These towels should be rinsed in distilled water and squeezed damp. Cover these towels with about 10 unfolded, dry paper towels.	
1161	AWPA E1 17 SECTION 4.2.4	**Juliet Tang:** TG	**4.2.3~~4~~** The damp towels covering the tray debris are shaken into the above described pail. After two to four hours, the dry towels and any insects and debris on them are removed from the pail and discarded. Insects clinging to the lower, damp towels are used in the test.	
1162	AWPA E1 17 SECTION 4.2.5	**Juliet Tang:** TG	**4.2.4~~5~~** Termites broken out of field colonies should not be held in the pail or container longer than 24 hours before being used.	
1163	AWPA E1 17 SECTION 4.2.6	**Juliet Tang:** TG	**4.2.5~~6~~ Caution:** Exercise reasonable care to ensure that all termites discarded (e.g. Step 4.2.4) are dead. Debris and towels may be microwaved, autoclaved, or oven dried. When a test is finished, reasonable care should also be exercised that living insects are not discarded.	
1164	AWPA E1 17 SECTION 5.0	**Juliet Tang:** TG	**5.0 Test Specimens:** The standard species for testing is southern yellow pine (*Pinus* spp.) and samples should be cut as accurately as possible from kiln dried sapwood, providing blocks with smooth surfaces. Initial sample sizes to be tested for solid wood should be 25 mm (1 inch) by 25 mm (1 inch) by 6 mm (1/4 inch) in the radial direction. The wood shall be free of sapstain chemicals, mold, stain, decay and insect attack with no visible defects, and have four to six rings per inch. For cellulosic composites, thickness may vary. Samples should measure 25 mm (1 inch) by 25 mm (1 inch) by the thickness of the material. Treatment of samples for testing should follow the procedures of AWPA E10 Sections 9 through 12, although using the samples sizes and numbers as described below. For testing of cellulosic composites, the material for testing should be selected from manufactured sheets or profiles that are representative of the tested material as used in service, with test samples having no large surface area glue-line exposure to termites.	
1165	AWPA E1 17 SECTION 5.1	**Juliet Tang:** TG moved to 5.2	~~**5.1** Weathering of Test Blocks~~	**Withdrawn by proponent prior to committee meeting.**
1168	AWPA E1 17 SECTION 5.1	**Juliet Tang:** TG	**5.1** Block Quantity and Identifications ~~Weathering of Test Blocks~~ 5.1.1 Five replicate blocks should be prepared for each variable under test, e.g. for each retention of each preservative or chemical to be tested. 5.1.2 Five untreated blocks as described in 5.1.1 must be used as controls for each separate study. 5.1.3 If using the indirect method of determining initial oven-dry weight of the test blocks (Section 5.4), then five extra blocks for each variable tested will need to be included, that can be sacrificed by oven-drying to determine initial moisture content of blocks before exposure to termites 5.1.4 If southern yellow pine is not used as the species in 5.1.1 and 5.1.2, then five blocks of untreated southern yellow pine must be added to each study to permit a comparison to studies using southern yellow pine as the major species. 5.1.5 All blocks should be identified with a number in a suitable manner.	
1169	AWPA E1 17 SECTION 5.1	**Juliet Tang:** TG	~~**5.1** Weathering of Test Blocks~~	**Withdrawn by proponent prior to committee meeting.**
1166	AWPA E1 17 SECTION 5.1.1	**Juliet Tang:** TG moved to 5.2	~~**5.1.1** If the test material is weathered prior to exposure to the insects, the complete details on the weathering shall be reported.~~	
1170	AWPA E1 17 SECTION 5.1.1	**Juliet Tang:** TG	~~**5.1.1** If the test material is weathered prior to exposure to the insects, the complete details on the weathering shall be reported.~~	**Withdrawn by proponent prior to committee meeting.**
1044	AWPA E1 17 SECTION 5.1.2	**Juliet Tang:** Clarity	**5.1.2** The AWPA E10 Section 12 weathering procedure for the soil-block test is recommended.	**Withdrawn by proponent prior to committee meeting.**

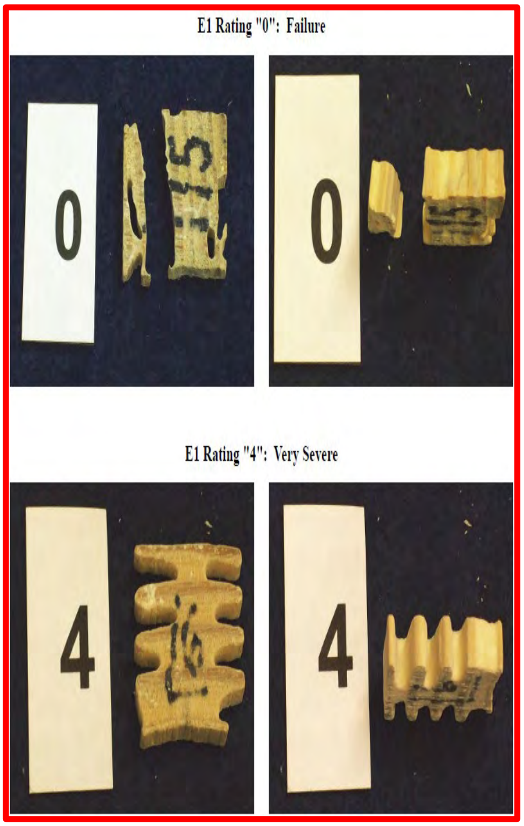
1045	AWPA E1 17 SECTION 5.1.2	**Juliet Tang:** Clarity	**5.1.2** The AWPA E10 Section 11 on conditioning and Section 12 on weathering procedures for the soil-block test are~~is~~ recommended.	**Withdrawn by proponent prior to committee meeting.**
1167	AWPA E1 17 SECTION 5.1.2	**Juliet Tang:** TG moved to 5.2	~~**5.1.2** The AWPA E10 weathering procedure for the soil-block test is recommended.~~	
1171	AWPA E1 17 SECTION 5.1.2	**Juliet Tang:** TG	~~**5.1.2** The AWPA E10 weathering procedure for the soil-block test is recommended.~~	**Withdrawn by proponent prior to committee meeting.**
1172	AWPA E1 17 SECTION 5.2	**Juliet Tang:** TG	**5.2** ~~Conditioning of the Test Blocks~~Weathering of Test Blocks. If the test material needs to be weathered prior to exposure to the insects, the complete details on the weathering shall be reported. The AWPA E10 weathering procedure for the soil-block test is recommended. **5.2.1** If volatile chemicals are to be tested, test samples should be aged prior to termite testing (e.g., see AWPA E10 12.1.2 Volatility Test) to aid in removal of volatile components. Aging methods must be reported with test data, as well as any preservative depletion, as indicated by appropriate chemical analyses. Solvent-only control samples shall be included in the test, and termite mortality in controls must be reported. **5.2.2** If leachable chemicals are to be tested, test samples should be protected from contact with the sand by placement on a plastic or aluminum foil square exceeding the dimensions of the sample by approximately 3 mm (1/8 in.) on each side.	
1002	AWPA E1 17 SECTION 5.2.1	**Juliet Tang:** "insure" is incorrect usage and spelling. "ensure" is correct.	**5.2.1** All test blocks, following weathering if used, shall be conditioned to a constant weight within the EMC range of 6 percent to 14 percent MC to e~~i~~nsure that all solvent is removed prior to exposure to insects.	**Withdrawn by proponent prior to committee meeting.**
1046	AWPA E1 17 SECTION 5.2.1	**Juliet Tang:** Many users of E1 do not understand this property of wood and, hence, do not understand why they see weight gain when there is obvious but minor amounts of termite damage to the wood.	**5.2.1** All test blocks, following weathering if used, shall be conditioned to a constant weight within the EMC range of 6 percent to 14 percent MC to insure that all solvent is removed prior to exposure to insects. Prior to conditioning, wood that has been previously moistened must be dried to at least 2% below the EMC of the conditioning room (see AWPA E10 Section 16). This is because wood exhibits hysteresis and does not release water as easily as it adsorbs it.	**Withdrawn by proponent prior to committee meeting.**
1173	AWPA E1 17 SECTION 5.2.1	**Juliet Tang:** TG	~~**5.2.1** All test blocks, following weathering if used, shall be conditioned to a constant weight within the EMC range of 6 percent to 14 percent MC to insure that all solvent is removed prior to exposure to insects.~~	
1174	AWPA E1 17 SECTION 5.2.2	**Juliet Tang:** TG	~~**5.2.2** Test blocks made from cellulosic composites treated after manufacturing should be conditioned in a similar manner to blocks made from sawn wood. Blocks made from composites treated on line during the manufacturing process may not require special conditioning to stabilize the preservative prior to simulated weathering, sterilization, and exposure to termites. However, it is required to store samples in a conditioning room for a sufficient period of time to reach constant weight.~~	
1047	AWPA E1 17 SECTION 5.2.3	**Juliet Tang:** Clarity	**5.2.3** The AWPA E10 Section 11 soil-block conditioning procedure is recommended ~~(AWPA E10-12)~~.	**Withdrawn by proponent prior to committee meeting.**
1175	AWPA E1 17 SECTION 5.2.3	**Juliet Tang:** TG	~~**5.2.3** The AWPA E10 soil-block conditioning procedure is recommended (AWPA E10-12).~~	
1176	AWPA E1 17 SECTION 5.2.4	**Juliet Tang:** TG	~~**5.2.4** Wood-Plastic Composite (WPC) specimens shall be dried to constant weight at 103°C or at 40°C in a force-draft oven. To simulate long term Wood-Plastic Composite (WPC) performance, WPC specimens can be conditioned prior to termite exposure. Examples of conditioning are immersion of specimens in water for five days at 70°C (158°F) or immersion in water for two weeks at room temperature.~~	
1177	AWPA E1 17 SECTION 5.3	**Juliet Tang:** TG	**5.3** ~~Block Quantity and Identifications~~Conditioning of the Test Blocks. All test blocks, following weathering if used, need to be conditioned to constant weight (see AWPA E10 Section 11 soil-block conditioning procedure). The conditions used will be dependent on the nature of chemicals used to treat the test blocks. The initial conditioned weight can be used indirectly (Section 5.3.1) to calculate the oven-dry weight of the test specimens, which is then used with the post-test oven-dry weight to obtain percent weight loss due to	

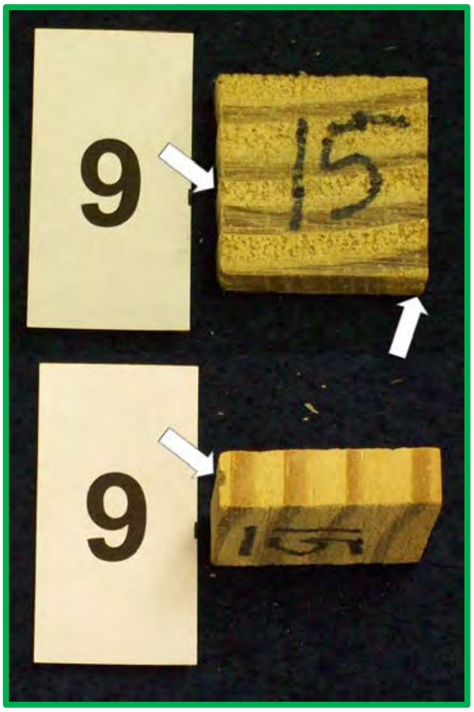
			termite attack. Alternatively, the initial conditioned weight can be used with the post-test conditioned weight to directly calculate percent weight loss by the equilibrium conditioning method (Section 5.3.2). **5.3.1** Oven-dry calculation method. This is an indirect method using a separate sets of sample blocks (section 5.1.3) that are conditioned with the test blocks to constant weights. These extra sample blocks are then oven-dried at 103°C, and their average percent MC determined. The average percent MC for each set is used to calculate the oven-dry mass of the individual test specimens in that set, using the equation in 5.3.1.1. This protects the test specimens from potentially destructive effects of high temperature oven-drying but depends upon high uniformity between conditioning of the sample blocks and test specimens. Initial conditioning of the samples can be in a forced draft oven at 40°C, or at lower temperature with controlled humidity, until a constant mass is obtained. Prior to conditioning, all blocks must be dried to at least 2% below the EMC of the conditioning chamber for all samples (see AWPA E10 Section 16). This is because wood exhibits a hysteresis effect, which can result in different final moisture contents at equilibrium, depending on whether the wood is absorbing or desorbing water. With this method, there is no requirement for post termite exposure conditioning and test blocks can be oven-dried at 103°C to determine their final oven dry weights. **5.3.1.1** Calculation of oven-dry (OD) weights of individual test specimens in exposure sets before termite exposure: $$\mathit{Calculated\ OD\ weight} = \frac{\mathit{Conditioned\ weight\ of\ test\ sample}}{\left(1+\left(\frac{\mathit{Average\ percent\ MC}}{100}\right)\right)}$$ **5.3.2** Equilibrium conditioning method. Conditioning of all test specimens to constant weight under uniform temperature (± 1°C) and humidity (± 2% RH) conditions can also be used to determine pre-exposure weights as long as the exact conditions are repeated after termite exposure. As in 5.3.1 all test specimens must be dried to at least 2% below the target EMC of the conditioning chamber before conditioning. **5.3.3** If wood-plastic composite (WPC) specimens can sustain high temperatures, the test specimens can be dried to constant weight at 103°C for determination of their pre- and post-test oven-dry weights without needing to calculate average percent MC, otherwise, a separate set of sample blocks need to be cut and conditioned with the test specimens at 40°C in a force-draft oven to obtain the calculated oven-dry weights as specified in Section 5.3.1. See AWPA E10 Section 11.2 for details on increasing the WPC moisture levels if necessary.	
1178	AWPA E1 17 SECTION 5.3.1	**Juliet Tang:** TG	~~**5.3.1** Five replicate blocks should be prepared for each variable under test, e.g. for each retention of each preservative or chemical to be tested.~~	
1179	AWPA E1 17 SECTION 5.4	**Juliet Tang:** TG	~~**5.4** Five untreated blocks as described in 5.3.1 must be used as controls for each separate study.~~	
1180	AWPA E1 17 SECTION 5.5	**Juliet Tang:** TG	~~**5.5** If a southern yellow pine is not used as the species in 5.3.1 and 5.4, then five blocks of untreated southern yellow pine must be added to each study to permit a comparison to studies using southern yellow pine as the major species.~~	
1181	AWPA E1 17 SECTION 5.6	**Juliet Tang:** TG	~~**5.6** All blocks should be identified with a number in a suitable manner.~~	
1048	AWPA E1 17 SECTION 5.7	**Juliet Tang:** Clarity	**5.7** Prior to termite testing, all blocks shall have their ~~ovendry~~ initial weights determined. This can be done by several methods, but three are described below.~~.~~	**Withdrawn by proponent prior to committee meeting.**
1182	AWPA E1 17 SECTION 5.7	**Juliet Tang:** TG	~~**5.7** Prior to testing, all blocks shall have their ovendry weights determined. This can be done by several methods.~~	
1050	AWPA E1 17 SECTION 5.7.1	**Juliet Tang:** Clarity	**5.7.1** Oven-dry calculation method. This is an indirect method because a separate set of sample blocks (similar in all ways to the test specimens) are conditioned with the test blocks, oven-dried, and average percent MC determined. The latter is then used to calculate the oven-dry mass of the test specimens. This protects the test specimens from potentially destructive effects of oven-drying on the test specimens but depends upon high uniformity between sample blocks and test specimens. Initial sample sizes to be tested for solid wood should be 25 mm (1 inch) by 25 mm (1 inch) by 6 mm (1/4 inch) in the radial direction. For cellulosic composites, thickness may vary. Samples should measure 25 mm (1 inch) by 25 mm (1 inch) by the thickness of the material. The samples shall be oven~~-~~-dried in a forced draft oven at 40°C until a constant mass and its moisture	**Withdrawn by proponent prior to committee meeting.**

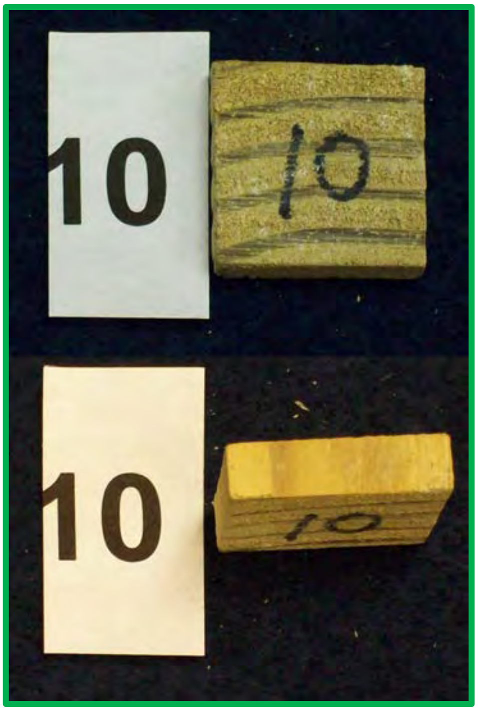
			content determined. Using this moisture content, the oven-dry weight of the test sample should be calculated and recorded. Wood-Plastic Composite (WPC) specimens shall be dried to constant weight at 103°C or at 40°C in a force-draft oven.	
1183	AWPA E1 17 SECTION 5.7.1	**Juliet Tang:** TG	~~**5.7.1** Ovendry calculation method. Initial sample sizes to be tested for solid wood should be 25 mm (1 inch) by 25 mm (1 inch) by 6 mm (1/4 inch) in the radial direction. For cellulosic composites, thickness may vary. Samples should measure 25 mm (1 inch) by 25 mm (1 inch) by the thickness of the material. The samples shall be oven dried in a forced draft oven at 40°C until a constant mass and its moisture content determined. Using this moisture content, the ovendry weight of the test sample should be calculated and recorded. Wood-Plastic Composite (WPC) specimens shall be dried to constant weight at 103°C or at 40°C in a force-draft oven.~~	
1052	AWPA E1 17 SECTION 5.7.1.1	**Juliet Tang:** Corrected spelling	**5.7.1.1** Calculation of oven-dry weight of sample:	**Withdrawn by proponent prior to committee meeting.**
1212	AWPA E1 17 SECTION 5.7.1.1	**Juliet Tang:** Removed calculated equation	~~**5.7.1.1** Calculation of ovendry weight of sample:~~	
1051	AWPA E1 17 SECTION 5.7.1.1 PARA 1	**Juliet Tang:** oven-dry Weight of conditioned test sample	$\text{Calculated ovendry weight} = \frac{\text{Wt. of test sample}}{(1+(\%MC/100))}$	**Withdrawn by proponent prior to committee meeting.**
1204	AWPA E1 17 SECTION 5.7.1.1 PARA 1	**Juliet Tang:** I was unable to delete equation. Please remove equation because it has been slightly altered and now appears in 5.3.1.1.	$\text{Calculated ovendry weight} = \frac{\text{Wt. of test sample}}{(1+(\%MC/100))}$	
1184	AWPA E1 17 SECTION 5.7.2	**Juliet Tang:** TG	~~**5.7.2** Immediately before testing, the sample can be ovendried to a constant mass, and the mass of each sample recorded.~~	
1185	AWPA E1 17 SECTION 5.7.3	**Juliet Tang:** TG	~~**5.7.3** If oven-drying or moisture content determination as in Section 5.7.1 is not advisable due to the nature of the chemicals to be tested, then blocks should otherwise be conditioned to a constant mass at a given temperature and humidity and weighed. Conditions of oven-drying (or other conditioning) must be reported with the test data.~~	
1186	AWPA E1 17 SECTION 6.1.3	**Juliet Tang:** TG	**6.1.3** Suitable numbers are used to identify each container. Five containers shall be assembled with sand, water, and test blocks, but without termites~~on each container~~.	
1187	AWPA E1 17 SECTION 6.1.4	**Juliet Tang:** TG	**6.1.4** For *Coptotermes*, 30 ml of sterile water is added to the 150 grams of sand in each container to bring the sand to 20% MC. For *Reticulitermes*, 27 ml of sterile water is added to the 150 grams of sand in each container to bring the sand to 18% MC. Water and test samples should be added to the sand in each container at least 2 hours prior to placing termites in the container.~~Thirty (30) milliliters, or sufficient distilled or deionized water as determined in Section 4.1, is added to each container. After addition of the water the containers are allowed to stand for two hours.~~	
1188	AWPA E1 17 SECTION 6.1.5.1	**Juliet Tang:** TG	**6.1.6~~5.1~~** In the two-choice procedure, the two test blocks are placed on the surface of the sand on the opposite sides of the test container, with two corners of each block against the side of the container.	
1003	AWPA E1 17 SECTION 6.1.5.2	**Juliet Tang:** Should be 3.1.2.	**6.1.5.2** Leachable chemicals should be protected from contact with the sand as described in Section 3.1.2~~1~~.	**Withdrawn by proponent prior to committee meeting.**
1189	AWPA E1 17 SECTION 6.1.5.2	**Juliet Tang:** TG	**6.1.7~~5.2~~** ~~Leachable chemicals should be protected from contact with the sand as described in Section 3.1.1.~~If leachable chemicals are to be tested, test samples including controls should be protected from contact with the sand by placement on a plastic or aluminum foil square exceeding the dimensions of the sample by approximately 3 mm (1/8 in.) on each side.	
1009	AWPA E1 17 SECTION 6.1.6	**Juliet Tang:** There is no other reference to 6.1.6 so I added clarification.	**6.1.6** Five containers shall be assembled with sand, water, and test blocks, but without termites for any chemical or retention where operative loss of chemical loss from the test specimen is a concern~~.~~	**Withdrawn by proponent prior to committee meeting.**
1190	AWPA E1 17 SECTION 6.1.6	**Juliet Tang:** TG. Moved to 6.1.3.	~~**6.1.6** Five containers shall be assembled with sand, water, and test blocks, but without termites.~~	

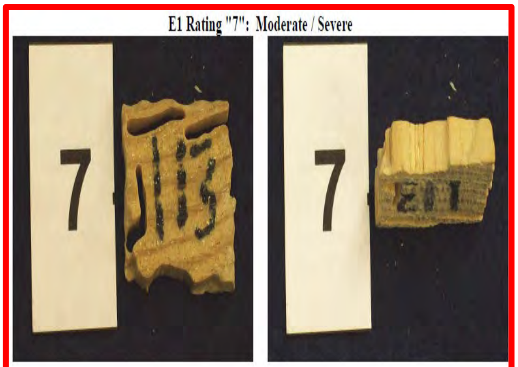
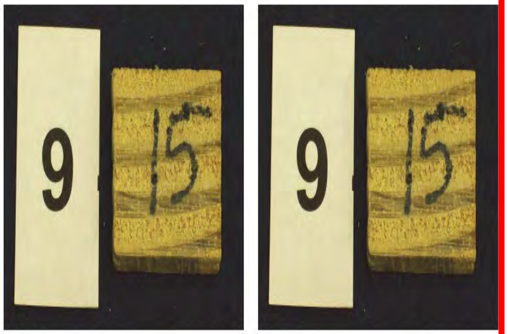
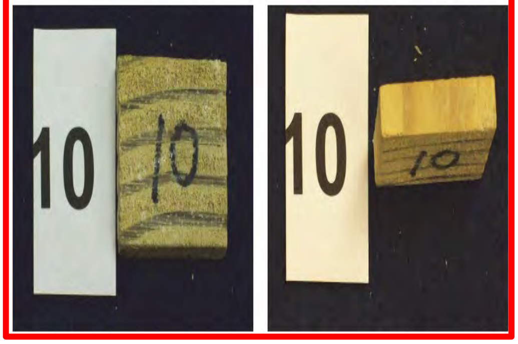
1191	AWPA E1 17 SECTION 6.2	**Juliet Tang:** TG	**6.2** Termite Exposure~~Adding Termites~~	
1192	AWPA E1 17 SECTION 6.2.1	**Juliet Tang:** TG	**6.2.1** Termite Source**:** Termites from a single colony or single field location should be used consistently in each individual test. If termites are collected from multiple locations or colonies, then each treatment should consist of the same number of replicates from each individual collection. ~~Prior to the test, the average mass of individual termites should be determined and recorded with the test results. This is calculated by weighing five groups of at least one hundred termites each, and averaging the average weight of an individual termite in each group of one hundred or more.~~ **6.2.2** Number of Termites: Termites may be counted or weighed. Counting is preferred and should be performed to ensure accuracy of mortality. The ratio of soldier to worker termites should reflect the ratio typically found in a wild colony of the species used. For *Coptotermes*, the number of soldiers is approximately 10% (360 workers, 40 soldiers). For *Reticulitermes*, the soldier number is approximately 1-3% (396 workers, 4 soldiers). **6.2.2.1** Counting: When counting, four hundred termites are individually counted using an aspirator of the type commonly used to pick up insects and added to each of the previously prepared containers. **6.2.2.2** Weighing: For large tests weighing sets of termites may be used. Prior to the test, the average mass of individual termites should be determined and recorded with the test results. This is calculated by weighing five groups of at least one hundred termites each, and averaging the average weight of an individual termite in each group of one hundred or more. Then termites are added to each container until the additions reaches the mass calculated for 400 termites.	
1194	AWPA E1 17 SECTION 6.2.2	**Juliet Tang:** TG	~~**6.2.2** Termites may be counted or weighed. Counting is preferred and should be performed to ensure accuracy of mortality. When counting, four hundred termites are individually counted using an aspirator of the type commonly used to pick up insects and added to each of the previously prepared containers. The ratio of soldier to worker termites should reflect the ratio typically found in a wild colony of the species used. For *Coptotermes*, the number of soldiers is approximately 10% (360 workers, 40 soldiers). For *Reticulitermes*, the soldier number is approximately 1-3% (396 workers, 4 soldiers). For large tests weighing sets of termites may be used. When weighing, four hundred termites (workers plus soldiers) are added to each of the previously prepared containers determined by mass based on the mass of the average of several representative groups of 400 termites from the same collection.~~	
1195	AWPA E1 17 SECTION 6.2.3	**Juliet Tang:** TG	**6.2.3** Addition of Termites: **6.2.3.1** In the single-choice procedure, termites should be placed on the opposite side of the container from the test block. **6.2.3.2** In the two-choice procedure, termites should be placed between the two test blocks. **6.2.3.3** The container tops are replaced loosely. If volatile chemicals are to be tested, the container lids may have to be removed and the containers inspected daily to prevent termites from escaping.	
1196	AWPA E1 17 SECTION 6.2.4	**Juliet Tang:** TG	~~**6.2.4** In the two-choice procedure, termites should be placed between the two test blocks.~~	
1197	AWPA E1 17 SECTION 6.2.5	**Juliet Tang:** TG	~~**6.2.5** The container tops are replaced loosely. If volatile chemicals are to be tested, the container lids may have to be removed and the containers inspected daily to prevent termites from escaping.~~	
1198	AWPA E1 17 SECTION 6.3	**Juliet Tang:** TG	**6.3** Container Storage and Inspection	
1199	AWPA E1 17 SECTION 6.3.1	**Juliet Tang:** TG	**6.3.1** All test containers are maintained at 24° to 28°C (75° to 82°F) for four weeks (28 days). **6.3.2** After one week, inspect control containers with termites. Termites from a healthy collection on untreated southern yellow pine should show close to 100% survival.	
1200	AWPA E1 17 SECTION 6.4.1	**Juliet Tang:** TG	**6.4.1** After four weeks the containers are disassembled and the blocks removed. Blocks should be ~~and~~ cleaned~~,~~ using a small brush and rinsed~~ing~~ with distilled or deionized water if necessary to remove sand.	
1201	AWPA E1 17 SECTION 6.4.3	**Juliet Tang:** TG	**6.4.3** The used sand and termites are discarded as described in Section 4.2.5~~6~~, and should not be reused for subsequent tests.	
1053	AWPA E1 17 SECTION 7.2	**Juliet Tang:** Clarity.	**7.2** In addition to visual rating as in Section 7.1.1, each block is oven dried to a consistent mass (or otherwise conditioned to a constant mass if oven drying is inappropriate due to	**Withdrawn by proponent**

			the nature of the chemicals tested), and that mass recorded. See AWPA E10 Section 16.1.	**prior to committee meeting.**
1202	AWPA E1 17 SECTION 7.2	**Juliet Tang:** TG	**7.2** In addition to visual rating as in Section 7.1.1, each block is oven dried to a consistent weight according to which method was used to determine the block mass before exposure (Section 5.3), and that weight recorded.~~mass (or otherwise conditioned to a constant mass if oven drying is inappropriate due to the nature of the chemicals tested), and that mass recorded.~~	
1006	AWPA E1 17 SECTION 8.2	**Juliet Tang:** There is no such thing as a "paired l-test". It should be paired t-test.	**8.2** Mean changes in block masses for each variable under test may be statistically compared by analysis of variance (ANOVA) of actual (mg) mass changes, and an appropriate means separation test. A paired ~~comparisons~~ *t*~~*l*~~-test may be used to compare the mass loss of treatment and control blocks within each treatment in the two-choice test.	
1203	AWPA E1 17 SECTION 8.3	**Juliet Tang:** TG	**8.3** Mean total termite mortalities for each variable under test may be statistically compared by analysis of variance (ANOVA) of proportional mortality values transformed by the arc~~-~~sine of the square root, and an appropriate means separation test.	
1210	AWPA E1 17 SECTION 9.1.1 PARA 1	**Juliet Tang:** TG requests 1) enlarged photos (face and end views, face view above end view) for each rating (1 rating per page), 2) for rating "9", the 2nd face view photo should be replaced with the end view photo, and 3) for rating "9" photos only, a white arrow should be pointing to each damage area (2 damaged areas visible in the face view and 1 in the edge view).	**E1 Rating "0": Failure**  **E1 Rating "4": Very Severe**	

			  E1 Rating "0": Failure E1 Rating "4": Very Severe	
1211	AWPA E1 17 SECTION 9.1.1 PARA 2	**Juliet Tang:** TG requests 1) enlarged photos (face and end views, face view above end view) for each rating	**E1 Rating "7": Moderate / Severe**	

		(1 rating per page), 2) for rating "9", the 2nd face view photo should be replaced with the end view photo, and 3) for rating "9" photos only, a white arrow should be pointing to each damage area (2 damaged areas visible in the face view and 1 in the edge view).	 **E1 Rating "9": Slight**  **E1 Rating "10": Sound**	

			10 10 10 10	

			E1 Rating "7": Moderate / Severe  E1 Rating "9": Slight  E1 Rating "10": Sound  		

AWPA Standard E15-17

22F-P6-E15: Proposal to Revise E15 With Changes to Section 6.1 and 11.1

Proponent(s): Grant Kirker

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 22 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

ID	▲Item	Reason	Proposed Change	Committee Status
1222	AWPA E15 17 SECTION 6.1	**Grant Kirker:** To reflect current scientific nomenclature, Rhodonia was added in the place of Postia as genus.	**6.1 Test fungi.** *Rhodonia (Postia) placenta* (ATCC 11538) is the preferred species for Douglas-fir blocks, while *Gloeophyllum trabeum* (ATCC 11539) is the preferred species for southern pine. Other fungi may be substituted, but care should be taken to evaluate the growth pattern of alternative fungi prior to testing. **Note:** The foregoing ATCC numbers refer to standard strains of test fungi maintained in the American Type Culture Collection (ATCC), PO Box 1549, Manassas, VA 20108, (www.atcc.org).	
1221	AWPA E15 17 SECTION 11.1	**Grant Kirker:** To provide statistical baseline for data reporting in accordance with Instruction #7 (Minimum data quality) for subcommittee P6.	Insert the following as 11.1.13: Report shall detail any statistical analysis applied to data, description of methods and resultant outputs. A regression analysis should include goodness of fit or r-squared values denoting significance of data. Comparative treatment data should be subject to a means comparison using either an ANOVA or Tukey's HSD test using a designated p-value.	

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AWPA Technical Committee P-9
Fall 2022 Standardization Cycle

Ballot Opening/Closing Dates:	10/17/2022 to 11/16/2022
Items Subject to Recirculation:	N/A
Recirculation Ballot Opening/Closing:	N/A
Total Number Committee Members:	25
Number of Eligible Voters:	22
Number of Eligible Ballots Received:	18
Ballot Return Percentage:	81.8%
Deadline for Appeals:	N/A – No Unresolved Objections

AWPA Standard P59-18

22F-P9-P59: Proposal to Reaffirm & Revise P59 Multiple Sections with Changes

Proponent(s): Craig McIntyre

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 17 Yes, 0 No, and 1 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

<table>
<tr><th>ID</th><th>▲Item</th><th>Reason</th><th>Proposed Change</th><th>Committee Status</th></tr>
<tr><td>1334</td><td>AWPA P59 18</td><td>Craig McIntyre:
No known issues with the existing standard.</td><td>Additional Comment: Reaffirm without Revisions</td><td></td></tr>
<tr><td>1252</td><td>AWPA P59 18 SECTION STANDARD FOR CHEMICALLY MODIFIED WOOD TYPE A (CM A) [Table Data]</td><td>Craig McIntyre:
Rationale: The only allowed diluent is still acetic acid but changes in the manufacturing and treating practices have allowed for a greater percentage of acetic acid in the treating solution. The controlling factor is still the bound acetyl content of the wood so these two changes</td><td><table>
<tr><th>Preservative Code</th><th>CM-A</th><th>Description of the Preservative</th><th>Application Method/Use Pattern</th><th>Acceptable Carriers/Diluents</th></tr>
<tr><td>Preservative Name</td><td>Chemically Modified Wood, Type A</td><td>Chemically Modified Wood</td><td>Vacuum-pressure treatment.
Treated wood and wood composite product end use</td><td>12%~~6%~~ (max.) Acetic Acid</td></tr>
</table></td><td></td></tr>
</table>

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<tr>
<td></td>
<td></td>
<td>allow the treater a little bit more flexibility in the manufacturing without jeopardizing the final product. Rationale: ASTM E1616 has been withdrawn by ASTM. AWPA A51 is added to assay wood. Rationale: The proponent also proposes that P9 recommends minimum retentions for UC1 to UC3B of 19% Bound Acetyl by Weight which would bring the AWPA in line with other organizations such as CTB-FCBA (France), HFM (DIBT, Germany), ICC-ES (USA) and SKH (KOMO, NL). Rationale: Editorial addition of date.</td>
<td>
<table>
<tr><td></td><td></td><td></td><td>applications are limited to UC1-3B and UC4A applications.</td><td></td></tr>
<tr><td colspan="5">Preservative Composition & Physical Chem. Requirements of New Material & Material in Use in Treating Solutions</td></tr>
<tr><td>Composition</td><td colspan="4">88%~~94%~~ (min.) Acetic Anhydride</td></tr>
<tr><td colspan="5">Treating Solution Requirements</td></tr>
<tr><td>Flash Point (closed cup)</td><td colspan="4">53ºC (127ºF)</td></tr>
<tr><td>Limitations</td><td colspan="4">Treating solution reacts violently with water. Use caution.</td></tr>
<tr><td colspan="5">Retention Criteria</td></tr>
<tr><td colspan="5">Bound Acetyl as weight percent</td></tr>
<tr><td colspan="5">Analytical Methods
[Only major analytical methods are listed. Refer to the AWPA BOS for additionally applicable standards]</td></tr>
<tr><td colspan="5">~~ASTM E1616: Standard Test Method for Determination of Acetic Anhydride by Gas Chromatography~~
AWPA A50-11: Test Method for Determination of Percent Bound Acetyl and Free Acetic Acid in Acetylated Wood by High Performance Liquid Chromatography

AWPA A51-19: Standard Method for Determining Penetration of Protectant in Acetylated Wood</td></tr>
<tr><td colspan="5">Committee Recommendations</td></tr>
<tr><td>Minimum Retentions</td><td colspan="4">Committee P-9 recommended the following minimum retentions for all sapwood southern pine species group (Southern, Mixed Southern, Radiata, Patula, Caribbean) (all sapwood): UC1 to UC3B—19%~~18%~~ Bound Acetyl by weight; UC4A – 20% Bound Acetyl by weight. The lower 5% tolerance limit for a charge must exceed the minimum.</td></tr>
<tr><td colspan="5">Enforcement</td></tr>
<tr><td>Historical</td><td colspan="4">Originally adopted in 2011</td></tr>
<tr><td>Reaffirmation</td><td colspan="4">2017</td></tr>
<tr><td>Amendments</td><td colspan="4">2017, 2018</td></tr>
</table>

Attachment(s): <i>P59 Data Package 7-7-2022.pdf</i>
</td>
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</tr>
</table>

American Wood Protection Association
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AWPA Technical Committee T-1
Fall 2022 Standardization Cycle

Ballot Opening/Closing Dates:	10/17/2022 to 11/16/2022
Items Subject to Recirculation:	N/A
Recirculation Ballot Opening/Closing:	N/A
Total Number Committee Members:	14
Number of Eligible Voters:	14
Number of Eligible Ballots Received:	12
Ballot Return Percentage:	85.7%
Deadline for Appeals:	N/A – No Unresolved Objections

AWPA Standard U1 Section 4-22

22F-T1-U1(4): Proposal to Revise U1 Section 4

Proponent(s): Andy Zahora

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 12 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

<table>
<tr><th>ID</th><th>▲Item</th><th>Reason</th><th>Proposed Change</th><th>Committee Status</th></tr>
<tr><td>1231</td><td>AWPA U1 SECTION 4 22 SECTION TABLE 1. PRESERVATIVES FOR PRESSURE TREATMENT PROCESSES [Table Data]</td><td>Andy Zahora: This preservative is being brought forth for standardization for Commodity Specification F Pressure Treated Wood Composites, Structural Glue Laminated Timbers, treated before and after gluing, as well as in Commodity Specification A Sawn Products.</td><td>
<table>
<tr><th>Preservative Abbreviation</th><th>P Standard Reference</th><th>Preservative</th><th>Retention Basis, as</th><th>Preservative Carrier</th></tr>
<tr><th colspan="5">Oilborne and Creosote-Based</th></tr>
<tr><td>CR</td><td>P1/P13</td><td>Creosote</td><td>Creosote</td><td>Not applicable</td></tr>
<tr><td>CR-S</td><td>P2</td><td>Creosote Solution</td><td>Creosote Solution</td><td>Not applicable</td></tr>
<tr><td>CR-PS</td><td>P3</td><td>Creosote-Petroleum Solution</td><td>Creosote plus Petroleum</td><td>Petroleum Oil</td></tr>
</table>
</td><td></td></tr>
</table>

Cu8	P37	Oxine Copper	Oxine Copper	Hydrocarbon Solvent Type A or C
CuN	P36	Copper Naphthenate	Copper	Hydrocarbon Solvent Type A
DCOI-A	P39	DCOI Solvent A	DCOI	Hydrocarbon Solvent Type A
DCOI-C	P39	DCOI Solvent C	DCOI	Hydrocarbon Solvent Type C
IPBC/PER	P58	IPBC/Permethrin	IPBC + PER	Hydrocarbon Solvent Type C
PCP-A	P35	Pentachlorophenol (Penta) Solvent A	PCP	Hydrocarbon Solvent Type A
PCP-C	P35	Pentachlorophenol (Penta) Solvent C	PCP	Hydrocarbon Solvent Type C
PCP-G	P35	Pentachlorophenol (Penta) Solvent G	PCP	Hydrocarbon Solvent Type G
SBX-O	P60	Inorganic Boron, Oilborne	B_2O_3	Creosote, Creosote Solution
Waterborne, Acid-based				
CCA	P23	Chromated Copper Arsenate Type C	Metal Oxides	Water
Waterborne, Alkali-based (amine/ammonia)				
ACQ-A	P26	Alkaline Copper Quat Type A	CuO + Quat	Water
ACQ-B	P27	Alkaline Copper Quat Type B	CuO + Quat	Water
ACQ-C	P28	Alkaline Copper Quat Type C	CuO + Quat	Water
ACQ-D	P29	Alkaline Copper Quat Type D	CuO + Quat	Water
ACZA	P22	Ammoniacal Copper Zinc Arsenate	Metal Oxides	Water
CA-B	P32	Copper Azole Type B	Cu + azole	Water
CA-C	P48	Copper Azole Type C	Cu + azoles	Water
CX-A	P33	Copper HDO Type A	CuO + H_3BO_3 + HDO	Water
KDS	P55	Alkaline Copper Betaine	CuO + DPAB + H_3BO_3	Water
KDS-B	P56	Alkaline Copper Betaine Type B	CuO + DPAB	Water
Waterborne, Other				
CuN-W	P34	Waterborne Copper Naphthenate	Copper	Water
EL2	P47	4,5-dichloro-2-n-octyl-4-isothiazolin-3-one (DCOI) and 2-Imidazolidinimine, 1-((6-chloro-3-pyridinyl)methyl)-nitro (Imidacloprid)	DCOI + Imidacloprid	Water

MCA	P61	Micronized Copper Azole	Cu + Tebuconazole	Water
MCA-C	P62	Micronized Copper Azole Type C	Cu + azoles	Water
PTI	P45	Propiconazole Tebuconazole Imidacloprid	Propiconazole Tebuconazole Imidacloprid	Water
SBX	P25	Inorganic Boron (SBX)	B_2O_3	Water

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AWPA Technical Committee T-2
Fall 2022 Standardization Cycle

Ballot Opening/Closing Dates: 10/17/2022 to 11/16/2022
Items Subject to Recirculation: 22F-T2-T1(A)-MOD
Recirculation Ballot Opening/Closing: 12/05/2022 – 12/15/2022
Total Number Committee Members: 60
Number of Eligible Voters: 60
Number of Eligible Ballots Received: 44
Ballot Return Percentage: 73.3%
Deadline for Appeals: 12/30/2022

AWPA Standard T1 Section A-22

22F-T2-T1(A)-MOD: Proposal to Revise T1 Section A Sawn Penetration Spec Table

Proponent(s): Jacob McBrayer

Committee Meeting Action: Authorized letter ballot as MODIFIED with all in favor except for 2 No votes.

Letter Ballot Results: Recirculation ballot required with 38 Yes, 2 No, and 3 Abstain after negative resolution process.

Recirculation Ballot Results: Passed as MODIFIED with 39 Yes, 2 No, 3 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

<table>
<tr><th>▼ID</th><th>Item</th><th>Reason</th><th>Proposed Change</th><th>Committee Status</th></tr>
<tr>
<td>1333</td>
<td>AWPA T1 SECTION A 22 SECTION 12.0 [Table Data]</td>
<td>Jacob McBrayer: Table replaced with the new column along with the change to the second row. These changes are necessary to support the proposals to support the machine vision technology. The southern pine row is moving to 85% visual to improve the current minimum penetration standards. This table also establishes the new metric for machine vision minimum conformance. This proposal will help improve the current</td>
<td>
<table>
<tr><td>-</td><td>-</td><td colspan="2">Penetration depth and/or percent of sapwood (b)</td><td colspan="2">Number of borings required</td><td colspan="2">Percent Conformance Required</td></tr>
<tr><td>Species</td><td>Incising (a)</td><td><125 mm (<5 in.) thick</td><td>≥125 mm (≥5 in.) thick</td><td>CR, CR-S, CR-PS</td><td>All other preservatives</td><td>Visual</td><td>Machine Vision (AWPA A93)</td></tr>
</table>
</td>
<td>Modified by proponent in committee meeting before motion. Southern pine-Percent Conformance Required-Visual proposed text changed from 85% to 80%</td>
</tr>
</table>

preservative penetration standards per the T2 instruction from the AWPA Executive Committee. Machine vision technology will be used to objectively, accurately, and consistently analyze penetration of wood cores. It will take our subjective method of penetration determination and turn it into a quantitative, unbiased assessment. This proposal will serve to implement this technology in commercial wood treating plants and subsequently increase confidence in the quality of the end product. Please refer to the supporting information document for further clarification.

Southern Pine Mixed Southern Pine Patula Pine	Not required	63 mm or 85% (2.5 in.) or 85%	63 mm or 85% (2.5 in.) or 85%	48	20	80%	92%
Radiata Pine Caribbean Pine	Not required	63 mm or 85% (2.5 in.) or 85%	63 mm or 85% (2.5 in.) or 85%	NA	20	90%	-
Ponderosa Pine Red Pine	Not required	63 mm or 85% (2.5 in.) or 85%	63 mm or 85% (2.5 in.) or 85%	48	20	80%	-
Eastern White Pine	Required (f)	10 mm and 90% (0.4 in. and 90%)	13 mm and 90% (0.5 in and 90%)	48	20	80%	-
Scots Pine	Not required	63 mm or 85% (2.5 in.) or 85%	63 mm or 85% (2.5 in.) or 85%	48	20	80%	-
Jack Pine Lodgepole Pine	Required (h)	10 mm and 90% (0.4 in. and 90%)	13 mm and 90% (0.5 in and 90%)	48	20	80%	-
Western White Spruce Englemann Spruce Sitka Spruce	Required (c)	10 mm and 90% (0.4 in. and 90%)	13 mm and 90% (0.5 in and 90%)	48	20	80%	-
Spruce-Pine-Fir Spruce-Pine-Fir West	Required (c) (h)	10 mm and 90% (0.4 in. and 90%)	13 mm and 90% (0.5 in and 90%)	NA	20	80%	-
Coastal Douglas-fir	Required	10 mm and 90% (0.4 in. and 90%)	13 mm and 90% (0.5 in	48	20	80%	-

<table>
<tr>
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<td>
<table>
<tr><td></td><td></td><td></td><td>and 90%)</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Hem-Fir
Hem-Fir North
Eastern Hemlock</td><td>Required (h)</td><td>10 mm and 90% (0.4 in. and 90%)</td><td>13 mm and 90% (0.5 in and 90%)</td><td>48</td><td>20</td><td>80%</td><td></td></tr>
<tr><td>Alpine Fir</td><td>Required (h)</td><td>10 mm and 90% (0.4 in. and 90%)</td><td>13 mm and 90% (0.5 in and 90%)</td><td>48</td><td>20</td><td>80%</td><td></td></tr>
<tr><td>Western red cedar
Alaskan yellow cedar
Incense-cedar</td><td>Not required</td><td>63 mm or 85% (2.5 in.) or 85%</td><td>63 mm or 85% (2.5 in.) or 85%</td><td>(g)</td><td>(g)</td><td>80%</td><td></td></tr>
<tr><td>Redwood UC1, UC2, UC3A/3B</td><td>Not required for</td><td>63 mm or 85% (2.5 in.) or 85%</td><td>63 mm or 85% (2.5 in.) or 85%</td><td>(g)</td><td>(g)</td><td>80%</td><td></td></tr>
<tr><td>UC4A/4B/4C</td><td>Required for</td><td>63 mm or 85% (2.5 in.) or 85%</td><td>63 mm or 85% (2.5 in.) or 85%</td><td>48</td><td>20</td><td>80%</td><td></td></tr>
<tr><td>White & Red Oak</td><td>Not required</td><td>(d)</td><td>(d)</td><td>NA</td><td>20</td><td>(e)</td><td></td></tr>
<tr><td>Maple</td><td>Not required</td><td>38 mm or 75% (1.5 in. or 75%)</td><td>38 mm or 75% (1.5 in. or 75%)</td><td>48</td><td>20</td><td>80%</td><td></td></tr>
<tr><td>Black Gum, Red Gum</td><td>Not required</td><td>38 mm or 75% (1.5 in. or 75%)</td><td>38 mm or 75% (1.5 in. or 75%)</td><td>48</td><td>20</td><td>80%</td><td></td></tr>
</table>
Attachment(s): *Supporting Information Doc.pdf*, *COMMENT_Zahora_T1 Section A_Proposal 1333.pdf*
</td>
<td></td>
</tr>
<tr>
<td>1327</td>
<td>AWPA T1 SECTION A 22 SECTION 12.0 [Table Data]</td>
<td>**Jacob McBrayer:**
Item proposal to delete and replace with another table with the following table in the later proposal. This proposal will help improve the current preservative penetration standards per the T2 instruction from the AWPA Executive Committee. Machine vision technology will be used to objectively, accurately, and consistently</td>
<td>
<table>
<tr><td>~~-~~</td><td>~~-~~</td><td colspan="2">~~Penetration depth and/or percent of sapwood (b)~~</td><td colspan="2">~~Number of borings required~~</td><td rowspan="2">~~Percent Conformance Required~~</td></tr>
<tr><td>~~Species~~</td><td>~~Incising (a)~~</td><td>~~(~~</td><td>~~≥125 mm (≥5~~</td><td>~~CR, CR-S,~~</td><td>~~All other preservatives~~</td></tr>
</table>
</td>
<td></td>
</tr>
</table>

analyze penetration of wood cores. It will take our subjective method of penetration determination and turn it into a quantitative, unbiased assessment. This proposal will serve to implement this technology in commercial wood treating plants and subsequently increase confidence in the quality of the end product. Please refer to the supporting information document for further clarification.

			~~in.) thick~~	~~CR-PS~~		
~~Southern Pine~~ ~~Mixed Southern Pine~~ ~~Patula Pine~~	~~Not required~~	~~63 mm or 85% (2.5 in.) or 85%~~	~~63 mm or 85% (2.5 in.) or 85%~~	~~48~~	~~20~~	~~80%~~
~~Radiata Pine~~ ~~Caribbean Pine~~	~~Not required~~	~~63 mm or 85% (2.5 in.) or 85%~~	~~63 mm or 85% (2.5 in.) or 85%~~	~~NA~~	~~20~~	~~90%~~
~~Ponderosa Pine~~ ~~Red Pine~~	~~Not required~~	~~63 mm or 85% (2.5 in.) or 85%~~	~~63 mm or 85% (2.5 in.) or 85%~~	~~48~~	~~20~~	~~80%~~
~~Eastern White Pine~~	~~Required (f)~~	~~10 mm and 90% (0.4 in. and 90%)~~	~~13 mm and 90% (0.5 in and 90%)~~	~~48~~	~~20~~	~~80%~~
~~Scots Pine~~	~~Not required~~	~~63 mm or 85% (2.5 in.) or 85%~~	~~63 mm or 85% (2.5 in.) or 85%~~	~~48~~	~~20~~	~~80%~~
~~Jack Pine~~ ~~Lodgepole Pine~~	~~Required (h)~~	~~10 mm and 90% (0.4 in. and 90%)~~	~~13 mm and 90% (0.5 in and 90%)~~	~~48~~	~~20~~	~~80%~~
~~Western White Spruce~~ ~~Englemann Spruce~~ ~~Sitka Spruce~~	~~Required (c)~~	~~10 mm and 90% (0.4 in. and 90%)~~	~~13 mm and 90% (0.5 in and 90%)~~	~~48~~	~~20~~	~~80%~~
~~Spruce-Pine-Fir~~ ~~Spruce-Pine-Fir West~~	~~Required (c) (h)~~	~~10 mm and 90% (0.4 in. and 90%)~~	~~13 mm and 90% (0.5 in and 90%)~~	~~NA~~	~~20~~	~~80%~~
~~Coastal Douglas-fir~~	~~Required~~	~~10 mm and 90% (0.4 in.~~	~~13 mm and 90% (0.5 in and 90%)~~	~~48~~	~~20~~	~~80%~~

		~~and 90%)~~				
~~Hem-Fir~~ ~~Hem-Fir North~~ ~~Eastern Hemlock~~	~~Required (h)~~	~~10 mm and 90% (0.4 in. and 90%)~~	~~13 mm and 90% (0.5 in and 90%)~~	~~48~~	~~20~~	~~80%~~
~~Alpine Fir~~	~~Required (h)~~	~~10 mm and 90% (0.4 in. and 90%)~~	~~13 mm and 90% (0.5 in and 90%)~~	~~48~~	~~20~~	~~80%~~
~~Western red cedar~~ ~~Alaskan yellow cedar~~ ~~Incense-cedar~~	~~Not required~~	~~63 mm or 85% (2.5 in.) or 85%~~	~~63 mm or 85% (2.5 in.) or 85%~~	~~(g)~~	~~(g)~~	~~80%~~
~~Redwood UC1, UC2, UC3A/3B~~	~~Not required for~~	~~63 mm or 85% (2.5 in.) or 85%~~	~~63 mm or 85% (2.5 in.) or 85%~~	~~(g)~~	~~(g)~~	~~80%~~
~~UC4A/4B/4C~~	~~Required for~~	~~63 mm or 85% (2.5 in.) or 85%~~	~~63 mm or 85% (2.5 in.) or 85%~~	~~48~~	~~20~~	~~80%~~
~~White & Red Oak~~	~~Not required~~	~~(d)~~	~~(d)~~	~~NA~~	~~20~~	~~(e)~~
~~Maple~~	~~Not required~~	~~38 mm or 75% (1.5 in. or 75%)~~	~~38 mm or 75% (1.5 in. or 75%)~~	~~48~~	~~20~~	~~80%~~
~~Black Gum, Red Gum~~	~~Not required~~	~~38 mm or 75% (1.5 in. or 75%)~~	~~38 mm or 75% (1.5 in. or 75%)~~	~~48~~	~~20~~	~~80%~~

Attachment(s): *Supporting Information Doc.pdf*

AWPA Standard U1 Commodity Specification A-22

22F-T2-U1(A): Proposal to Revise U1 Comm Spec A

Proponent(s): Andy Zahora, Bob Baeppler

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 43 Yes, 0 No, and 1 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

<table>
<tr><th>ID</th><th>▲Item</th><th>Reason</th><th>Proposed Change</th><th>Committee Status</th></tr>
<tr>
<td>1237</td>
<td>AWPA U1 COMM SPEC A 22 SECTION 3.0 [Table Data]9</td>
<td>Andy Zahora: The attached file â€œComSpec A SYP DCOI-C Supporting Data.pdfâ€ contains the same data that is being supplied to Subcommittee T8 for inclusion of DCOI-C into Commodity Specification F, Tables 3.3 for laminations treated prior to assembly. This data also shows that DCOI-C can meet all requirements for Sawn Products. DCOI retentions have been set at 1/3rd that for PCP, which for UC4C sawn products is set at 0.50 pcf. The attached data shows that DCOI-C retentions were consistently above 0.17 pcf in the</td>
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<tr><th>kg/m^3 (SI units)</th><th colspan="4">Pines</th><th>Spruce</th><th></th><th></th><th>Hem-fir</th><th>Western Redcedar</th><th></th><th colspan="2">Red Oak$^{(a)}$</th><th></th><th></th></tr>
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Mixed Southern
Radiata, Patula
Caribbean</th><th>Ponderosa
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Eastern White</th><th>Scots Pine-Ger
Scots Pine-Swe</th><th>Jack
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Sitka Spruce</th><th>Spruce-Pine-Fir West</th><th>Coastal Douglas-fir</th><th>Hem-fir North
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<tr><td>CR (as solution)</td><td>128</td><td>128</td><td>#</td><td>128</td><td>128</td><td>#</td><td>128</td><td>128</td><td>128</td><td>R</td><td>96</td><td>80</td><td>160</td><td>96</td></tr>
<tr><td>CR-S (as solution)</td><td>128</td><td>128</td><td>#</td><td>128</td><td>128</td><td>#</td><td>128</td><td>128</td><td>128</td><td>R</td><td>96</td><td>80</td><td>#</td><td>96</td></tr>
<tr><td>CR-PS (as solution)</td><td>128</td><td>128</td><td>#</td><td>128</td><td>128</td><td>#</td><td>128</td><td>128</td><td>128</td><td>R</td><td>96</td><td>80</td><td>#</td><td>96</td></tr>
<tr><td>Cu8</td><td>0.32</td><td>0.32</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>0.32</td><td>0.32</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td></tr>
<tr><td>CuN (as Cu metal)$^{(b)}$</td><td>0.64</td><td>0.64</td><td>#</td><td>#</td><td>0.64</td><td>#</td><td>0.64</td><td>0.64</td><td>0.64</td><td>R</td><td>0.75</td><td>0.64</td><td>0.80</td><td>0.80</td></tr>
<tr><td>DCOI-C</td><td>2.1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>PCP-A</td><td>6.4</td><td>6.4</td><td>#</td><td>6.4</td><td>6.4</td><td>#</td><td>6.4</td><td>6.4</td><td>6.4</td><td>R</td><td>4.8</td><td>4.0</td><td>#</td><td>4.8</td></tr>
<tr><td>PCP-C</td><td>6.4</td><td>6.4</td><td>#</td><td>6.4</td><td>6.4</td><td>#</td><td>6.4</td><td>6.4</td><td>6.4</td><td>R</td><td>4.8</td><td>4.0</td><td>#</td><td>4.8</td></tr>
<tr><td>ACQ-A$^{(b)}$</td><td>2.4</td><td>2.4</td><td>2.4</td><td>2.4</td><td>#</td><td>#</td><td>2.4</td><td>2.4</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>ACQ-B$^{(b)}$</td><td>4.0</td><td>4.0</td><td>#</td><td>#</td><td>4.0</td><td>#</td><td>4.0</td><td>4.0</td><td>4.0</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>ACQ-C$^{(b)}$</td><td>4.0</td><td>4.0</td><td>#</td><td>4.0</td><td>#</td><td>4.0</td><td>4.0</td><td>4.0</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>ACQ-D$^{(b)}$</td><td>2.4</td><td>2.4</td><td>2.4</td><td>2.4</td><td>#</td><td>#</td><td>2.4</td><td>2.4</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>ACZA$^{(b)}$</td><td>4.0</td><td>4.0</td><td>#</td><td>4.0</td><td>4.0</td><td>4.0</td><td>4.0</td><td>4.0</td><td>4.0</td><td>4.0</td><td colspan="2">4.0</td><td>#</td><td>4.0</td></tr>
<tr><td>CA-B$^{(b)}$</td><td>1.7</td><td>1.7</td><td>1.7</td><td>#</td><td>#</td><td>#</td><td>1.7</td><td>1.7</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>CA-C$^{(b)}$</td><td>1.0</td><td>1.0</td><td>1.0</td><td>#</td><td>#</td><td>#</td><td>1.0</td><td>1.0</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>CuN-W$^{(b)}$</td><td>1.12</td><td>1.12</td><td>1.12</td><td>1.12</td><td>#</td><td>#</td><td>1.12</td><td>1.12</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>CX-A$^{(b)}$</td><td>3.3</td><td>3.3</td><td>3.3</td><td>#</td><td>#</td><td>#</td><td>3.3</td><td>3.3</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>EL2$^{(b)}$ (+MCS at 3.2 kg/m^3)</td><td>0.30</td><td>0.30</td><td>#</td><td>#</td><td>#</td><td>#</td><td>0.30</td><td>0.30</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>KDS$^{(b)}$</td><td>3.0</td><td>3.0</td><td>3.0</td><td>#</td><td>#</td><td>#</td><td>3.0</td><td>3.0</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>MCA$^{(b)}$</td><td>1.0</td><td>1.0</td><td>1.0</td><td>#</td><td>#</td><td>#</td><td>#</td><td>1.0</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>MCA-C$^{(b)}$</td><td>0.8</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>0.8</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>PTI$^{(b)}$</td><td>0.21</td><td>0.21</td><td>#</td><td>#</td><td>#</td><td>#</td><td>0.21</td><td>0.21</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
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Attachment(s): <i>ComSpec A SYP DCOI-C supporting data revised 7-13-22.pdf</i>, <i>ComSpec A SYP DCOI-C Supporting data.pdf</i>
</td>
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</tr>
</table>

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<tr><td>1238</td><td>AWPA U1 COMM SPEC A 22 SECTION 3.0 [Table Data]11</td><td>**Andy Zahora:** The attached file â€œComSpec A SYP DCOI-C Supporting Data.pdfâ€□ contains the same data that is being supplied to Subcommittee T8 for inclusion of DCOI-C into Commodity Specification F, Tables 3.3 for laminations treated prior to assembly. This data also shows that DCOI-C can meet all requirements for Sawn Products. DCOI retentions have been set at 1/3rd that for PCP, which for UC4C sawn products is set at 0.50 pcf. The attached data shows that DCOI-C retentions were consistently above 0.17 pcf in the Â½-1â€□ assay zone, and should easily satisfy retentions in the lumber assay zone of</td><td>
<table>
<tr><th>**pcf**
(US Customary units)</th><th colspan="4">**Pines**</th><th>**Spruce**</th><th rowspan="2">Spruce-Pine-Fir West</th><th rowspan="2">Coastal Douglas-fir</th><th rowspan="2">Hem-fir
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<tr><td>**CR-S** (as solution)</td><td>8.0</td><td>8.0</td><td>#</td><td>8.0</td><td>8.0</td><td>#</td><td>8.0</td><td>8.0</td><td>8.0</td><td>R</td><td>6.0</td><td>5.0</td><td>#</td><td>6.0</td></tr>
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<tr><td>**Cu8**</td><td>0.020</td><td>0.020</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>0.020</td><td>0.020</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td></tr>
<tr><td>**CuN** (as Cu metal)[b]</td><td>0.040</td><td>0.040</td><td>#</td><td>#</td><td>0.040</td><td>#</td><td>0.040</td><td>0.040</td><td>0.040</td><td>R</td><td>0.047</td><td>0.040</td><td>0.050</td><td>0.050</td></tr>
<tr><td>**DCOI-C**</td><td>0.13</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>**PCP-A**</td><td>0.40</td><td>0.40</td><td>#</td><td>0.40</td><td>0.40</td><td>#</td><td>0.40</td><td>0.40</td><td>0.40</td><td>R</td><td>0.30</td><td>0.25</td><td>#</td><td>0.30</td></tr>
<tr><td>**PCP-C**</td><td>0.40</td><td>0.40</td><td>#</td><td>0.40</td><td>0.40</td><td>#</td><td>0.40</td><td>0.40</td><td>0.40</td><td>R</td><td>0.30</td><td>0.25</td><td>#</td><td>0.30</td></tr>
<tr><td>**ACQ-A**[b]</td><td>0.15</td><td>0.15</td><td>0.15</td><td>0.15</td><td>#</td><td>#</td><td>0.15</td><td>0.15</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>**ACQ-B**[b]</td><td>0.25</td><td>0.25</td><td>#</td><td>#</td><td>0.25</td><td>#</td><td>0.25</td><td>0.25</td><td>0.25</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
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<tr><td>**ACQ-D**[b]</td><td>0.15</td><td>0.15</td><td>0.15</td><td>0.15</td><td>#</td><td>#</td><td>0.15</td><td>0.15</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>**ACZA**[b]</td><td>0.25</td><td>0.25</td><td>#</td><td>0.25</td><td>0.25</td><td>0.25</td><td>0.25</td><td>0.25</td><td>0.25</td><td>0.25</td><td colspan="2">0.25</td><td>#</td><td>0.25</td></tr>
<tr><td>**CA-B**[b]</td><td>0.10</td><td>0.10</td><td>0.10</td><td>#</td><td>#</td><td>#</td><td>0.10</td><td>0.10</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>**CA-C**[b]</td><td>0.060</td><td>0.060</td><td>0.060</td><td>#</td><td>#</td><td>#</td><td>0.060</td><td>0.060</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>**CuN-W**[b]</td><td>0.070</td><td>0.070</td><td>0.070</td><td>0.070</td><td>#</td><td>#</td><td>0.070</td><td>0.070</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>**CX-A**[b]</td><td>0.206</td><td>0.206</td><td>0.206</td><td>#</td><td>#</td><td>#</td><td>0.206</td><td>0.206</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>**EL2**[b] (+MCS at 0.20 pcf)</td><td>0.019</td><td>0.019</td><td>#</td><td>#</td><td>#</td><td>#</td><td>0.019</td><td>0.019</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>**KDS**[b]</td><td>0.19</td><td>0.19</td><td>0.19</td><td>#</td><td>#</td><td>#</td><td>0.19</td><td>0.19</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>**MCA**[b]</td><td>0.060</td><td>0.060</td><td>0.060</td><td>#</td><td>#</td><td>#</td><td>#</td><td>0.060</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>**MCA-C**[b]</td><td>0.050</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>0.050</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>**PTI**[b]</td><td>0.013</td><td>0.013</td><td>#</td><td>#</td><td>#</td><td>#</td><td>0.013</td><td>0.013</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
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		0-0.6â€ assay zone. The penetration results also easily satisfied the sawn products requirements of 2.5 inch or 85% of the sapwood.		
1239	AWPA U1 COMM SPEC A 22 SECTION 3.0 [Table Data]13	**Andy Zahora:** The attached file â€œComSpec A SYP DCOI-C Supporting Data.pdfâ€ contains the same data that is being supplied to Subcommittee T8 for inclusion of DCOI-C into Commodity Specification F, Tables 3.3 for laminations treated prior to assembly. This data also shows that DCOI-C can meet all requirements for Sawn Products. DCOI retentions have been set at 1/3rd that for PCP, which for UC4C sawn products is set at 0.50 pcf. The attached data shows that DCOI-C retentions were consistently above 0.17 pcf in the Â½-1â€ assay zone, and should easily satisfy retentions in the lumber assay zone of 0-0.6â€ assay zone. The penetration results also easily satisfied the	Attachment(s): *ComSpec A SYP DCOI-C supporting data revised 7-13-22.pdf*, *ComSpec A SYP DCOI-C Supporting data.pdf*	

kg/m^3 (SI units)	**Pines**				**Spruce**						Red Oak(b)			
Preservative	Southern Mixed Southern Radiata, Patula Caribbean	Ponderosa Red Eastern White	Scots Pine-Ger Scots Pine-Swe	Jack Lodgepole	Western White Engelmann Sitka Spruce	Spruce-Pine-Fir West	Coastal Douglas-fir(a)	Hem-fir Hem-fir North Eastern Hemlock Subalpine Fir	Western Redcedar Alaska Yellow Cedar Incense Cedar Redwood	White Oak	<5"	≥5"	Maple	Black & Red Gum
CR (as solution)	128	128	#	128	128	#	128	128	128	R	96	80	160	96
CR-S (as solution)	128	128	#	128	128	#	128	128	128	R	96	80	#	96
CR-PS (as solution)	128	128	#	128	128	#	128	128	128	R	96	80	#	96
Cu8	0.32	0.32	#	#	#	#	#	0.32	0.32	#	#	#	#	#
CuN (as Cu metal)(c)	0.64	0.64	#	#	0.64	#	0.64	0.64	0.64	R	0.75	0.64	0.80	0.80
DCOI-A	2.1	#	#	#	#	#	2.1	#	#	#	#	#	#	#
DCOI-C	2.1													
PCP-A	6.4	6.4	#	6.4	6.4	#	6.4	6.4	6.4	R	4.8	4.0	#	4.8
PCP-C	6.4	6.4	#	6.4	6.4	#	6.4	6.4	6.4	R	4.8	4.0	#	4.8
ACQ-A(c)	2.4	2.4	2.4	2.4	#	#	2.4	2.4	#	#	#		#	#
ACQ-B(c)	4.0	4.0	#	#	4.0	#	4.0	4.0	4.0	#	#		#	#
ACQ-C(c)	4.0	4.0	#	4.0	#	4.0	4.0	4.0	#	#	#		#	#
ACQ-D(c)	2.4	2.4	2.4	2.4	#	#	2.4	2.4	#	#	#		#	#
ACZA(c)	4.0	4.0	#	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		#	4.0
CA-B(c)	1.7	1.7	1.7	#	#	#	1.7	1.7	#	#	#		#	#
CA-C(c)	1.0	1.0	1.0	#	#	#	1.0	1.0	#	#	#		#	#
CCA(c)	4.0	4.0	#	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		#	4.0
CuN-W(c)	1.12	1.12	1.12	1.12	#	#	1.12	1.12	#	#	#		#	#
CX-A(c)	3.3	3.3	3.3	#	#	#	3.3	3.3	#	#	#		#	#
EL2(c) (+MCS at 3.2 kg/m^3)	0.30	0.30	#	#	#	#	0.30	0.30	#	#	#		#	#
KDS(c)	3.0	3.0	3.0	#	#	#	3.0	3.0	#	#	#		#	#
MCA(c)	1.0	1.0	1.0	#	#	#	#	1.0	#	#	#		#	#
MCA-C(c)	1.0	#	#	#	#	#	#	1.0	#	#	#		#	#
PTI(c)	0.29	0.29	#	#	#	#	0.29	0.29	#	#	#		#	#

<table>
<tr><td></td><td></td><td>sawn products requirements of 2.5 inch or 85% of the sapwood.</td><td></td><td></td></tr>
<tr><td>1240</td><td>AWPA U1 COMM SPEC A 22 SECTION 3.0 [Table Data]15</td><td>Andy Zahora: The attached file â€œComSpec A SYP DCOI-C Supporting Data.pdfâ€□ contains the same data that is being supplied to Subcommittee T8 for inclusion of DCOI-C into Commodity Specification F, Tables 3.3 for laminations treated prior to assembly. This data also shows that DCOI-C can meet all requirements for Sawn Products. DCOI retentions have been set at 1/3rd that for PCP, which for UC4C sawn products is set at 0.50 pcf. The attached data shows that DCOI-C retentions were consistently above 0.17 pcf in the Â½-1â€□ assay zone, and should easily satisfy retentions in the lumber assay zone of 0-0.6â€□ assay zone. The penetration results also easily satisfied the sawn products requirements of 2.5 inch or 85% of the sapwood.</td><td>
<table>
<tr><th>pcf
(US Customary units)</th><th colspan="4">Pines</th><th>Spruce</th><th></th><th></th><th>Hem-fir
Hem-fir North
Eastern Hemlock
Subalpine Fir</th><th>Western Redcedar
Alaska Yellow Cedar
Incense Cedar
Redwood</th><th></th><th colspan="2">Red Oak(b)</th><th></th><th></th></tr>
<tr><th>Preservative</th><th>Southern
Mixed Southern
Radiata, Patula
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Red
Eastern White</th><th>Scots Pine-Ger
Scots Pine-Swe</th><th>Jack
Lodgepole</th><th>Western White
Engelmann
Sitka Spruce</th><th>Spruce-Pine-Fir West</th><th>Coastal Douglas-fir(a)</th><th></th><th></th><th>White Oak</th><th><5"</th><th>≥5"</th><th>Maple</th><th>Black & Red Gum</th></tr>
<tr><td>CR (as solution)</td><td>8.0</td><td>8.0</td><td>#</td><td>8.0</td><td>8.0</td><td>#</td><td>8.0</td><td>8.0</td><td>8.0</td><td>R</td><td>6.0</td><td>5.0</td><td>10.0</td><td>6.0</td></tr>
<tr><td>CR-S (as solution)</td><td>8.0</td><td>8.0</td><td>#</td><td>8.0</td><td>8.0</td><td>#</td><td>8.0</td><td>8.0</td><td>8.0</td><td>R</td><td>6.0</td><td>5.0</td><td>#</td><td>6.0</td></tr>
<tr><td>CR-PS (as solution)</td><td>8.0</td><td>8.0</td><td>#</td><td>8.0</td><td>8.0</td><td>#</td><td>8.0</td><td>8.0</td><td>8.0</td><td>R</td><td>6.0</td><td>5.0</td><td>#</td><td>6.0</td></tr>
<tr><td>Cu8</td><td>0.020</td><td>0.020</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>0.020</td><td>0.020</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td></tr>
<tr><td>CuN (as Cu metal)(c)</td><td>0.040</td><td>0.040</td><td>#</td><td>#</td><td>0.040</td><td>#</td><td>0.040</td><td>0.040</td><td>0.040</td><td>R</td><td>0.047</td><td>0.040</td><td>0.050</td><td>0.050</td></tr>
<tr><td>DCOI-A</td><td>0.13</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>0.13</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td></tr>
<tr><td>DCOI-C</td><td>0.13</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>PCP-A</td><td>0.40</td><td>0.40</td><td>#</td><td>0.40</td><td>0.40</td><td>#</td><td>0.40</td><td>0.40</td><td>0.40</td><td>R</td><td>0.30</td><td>0.25</td><td>#</td><td>0.30</td></tr>
<tr><td>PCP-C</td><td>0.40</td><td>0.40</td><td>#</td><td>0.40</td><td>0.40</td><td>#</td><td>0.40</td><td>0.40</td><td>0.40</td><td>R</td><td>0.30</td><td>0.25</td><td>#</td><td>0.30</td></tr>
<tr><td>ACQ-A(c)</td><td>0.15</td><td>0.15</td><td>0.15</td><td>0.15</td><td>#</td><td>#</td><td>0.15</td><td>0.15</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>ACQ-B(c)</td><td>0.25</td><td>0.25</td><td>#</td><td>#</td><td>0.25</td><td>#</td><td>0.25</td><td>0.25</td><td>0.25</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>ACQ-C(c)</td><td>0.25</td><td>0.25</td><td>#</td><td>0.25</td><td>#</td><td>0.25</td><td>0.25</td><td>0.25</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>ACQ-D(c)</td><td>0.15</td><td>0.15</td><td>0.15</td><td>0.15</td><td>#</td><td>#</td><td>0.15</td><td>0.15</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>ACZA(c)</td><td>0.25</td><td>0.25</td><td>#</td><td>0.25</td><td>0.25</td><td>0.25</td><td>0.25</td><td>0.25</td><td>0.25</td><td>0.25</td><td colspan="2">0.25</td><td>#</td><td>0.25</td></tr>
<tr><td>CA-B(c)</td><td>0.10</td><td>0.10</td><td>0.10</td><td>#</td><td>#</td><td>#</td><td>0.10</td><td>0.10</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>CA-C(c)</td><td>0.060</td><td>0.060</td><td>0.060</td><td>#</td><td>#</td><td>#</td><td>0.060</td><td>0.060</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>CCA(c)</td><td>0.25</td><td>0.25</td><td>#</td><td>0.25</td><td>0.25</td><td>0.25</td><td>0.25</td><td>0.25</td><td>0.25</td><td>0.25</td><td colspan="2">0.25</td><td>#</td><td>0.25</td></tr>
<tr><td>CuN-W(c)</td><td>0.070</td><td>0.070</td><td>0.070</td><td>0.070</td><td>#</td><td>#</td><td>0.070</td><td>0.070</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>CX-A(c)</td><td>0.206</td><td>0.206</td><td>0.206</td><td>#</td><td>#</td><td>#</td><td>0.206</td><td>0.206</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>EL2(c)
(+MCS at 0.20 pcf)</td><td>0.019</td><td>0.019</td><td>#</td><td>#</td><td>#</td><td>#</td><td>0.019</td><td>0.019</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>KDS(c)</td><td>0.19</td><td>0.19</td><td>0.19</td><td>#</td><td>#</td><td>#</td><td>0.19</td><td>0.19</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>MCA(c)</td><td>0.060</td><td>0.060</td><td>0.060</td><td>#</td><td>#</td><td>#</td><td>#</td><td>0.060</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>MCA-C(c)</td><td>0.060</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>0.060</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>PTI(c)</td><td>0.018</td><td>0.018</td><td>#</td><td>#</td><td>#</td><td>#</td><td>0.018</td><td>0.018</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
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Attachment(s): <i>ComSpec A SYP DCOI-C supporting data revised 7-13-22.pdf</i>, <i>ComSpec A SYP DCOI-C Supporting data.pdf</i></td><td></td></tr>
<tr><td>1241</td><td>AWPA U1</td><td>Andy Zahora:</td><td>
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<tr><th></th><th>Pines</th><th>Spruce</th><th></th><th></th><th></th><th>Redwood</th><th></th><th></th><th>Maple</th><th></th></tr>
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<tr>
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<td>COMM SPEC A 22 SECTION 3.0 [Table Data]17</td>
<td>The attached file â€œComSpec A SYP DCOI-C Supporting Data.pdfâ€□ contains the same data that is being supplied to Subcommittee T8 for inclusion of DCOI-C into Commodity Specification F, Tables 3.3 for laminations treated prior to assembly. This data also shows that DCOI-C can meet all requirements for Sawn Products. DCOI retentions have been set at 1/3rd that for PCP, which for UC4C sawn products is set at 0.50 pcf. The attached data shows that DCOI-C retentions were consistently above 0.17 pcf in the Â½-1â€□ assay zone, and should easily satisfy retentions in the lumber assay zone of 0-0.6â€□ assay zone. The penetration results also easily satisfied the sawn products requirements of 2.5 inch or 85% of the sapwood.</td>
<td>
<table>
<tr><th>kg/m^3
(SI units)</th><th rowspan="2">Southern
Mixed Southern
Radiata, Patula
Caribbean</th><th rowspan="2">Ponderosa
Red
Eastern White</th><th rowspan="2">Scots Pine-Ger
Scots Pine-Swe</th><th rowspan="2">Jack
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Engelmann
Sitka Spruce</th><th rowspan="2">Spruce-Pine-Fir West</th><th rowspan="2">Coastal Douglas-fir$^{(a)}$</th><th rowspan="2">Hem-fir
Hem-fir North
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<tr><th>Preservative</th><th><5"</th><th>≥5"</th></tr>
<tr><td>CR (as solution)</td><td>160</td><td>160</td><td>#</td><td>160</td><td>160</td><td>#</td><td>160</td><td>160</td><td>160</td><td>R</td><td>112</td><td>96</td><td>160</td><td>128</td></tr>
<tr><td>CR-S (as solution)</td><td>160</td><td>160</td><td>#</td><td>160</td><td>160</td><td>#</td><td>160</td><td>160</td><td>160</td><td>R</td><td>112</td><td>96</td><td>#</td><td>128</td></tr>
<tr><td>CR-PS (as solution)</td><td>160</td><td>160</td><td>#</td><td>160</td><td>160</td><td>#</td><td>160</td><td>160</td><td>160</td><td>R</td><td>112</td><td>96</td><td>#</td><td>128</td></tr>
<tr><td>CuN (as Cu metal)$^{(c)}$</td><td>0.96</td><td>0.96</td><td>#</td><td>#</td><td>0.96</td><td>#</td><td>0.96</td><td>0.96</td><td>0.96</td><td>R</td><td>0.96</td><td>0.96</td><td>0.96</td><td>0.96</td></tr>
<tr><td>DCOI-A</td><td>2.4</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>2.1</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td></tr>
<tr><td><u>DCOI-C</u></td><td><u>2.4</u></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>PCP-A</td><td>8.0</td><td>8.0</td><td>#</td><td>6.4</td><td>6.4</td><td>#</td><td>6.4</td><td>6.4</td><td>8.0</td><td>R</td><td>5.6</td><td>4.8</td><td>#</td><td>6.4</td></tr>
<tr><td>PCP-C</td><td>8.0</td><td>8.0</td><td>#</td><td>6.4</td><td>6.4</td><td>#</td><td>6.4</td><td>6.4</td><td>8.0</td><td>R</td><td>5.6</td><td>4.8</td><td>#</td><td>6.4</td></tr>
<tr><td>ACQ-A$^{(c)}$</td><td>6.4</td><td>6.4</td><td>6.4</td><td>6.4</td><td>6.4</td><td>#</td><td>6.4</td><td>6.4</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>ACQ-B$^{(c)}$</td><td>6.4</td><td>6.4</td><td>#</td><td>#</td><td>6.4</td><td>#</td><td>6.4</td><td>6.4</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
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<tr><td>CuN-W$^{(c)}$</td><td>1.76</td><td>1.76</td><td>1.76</td><td>1.76</td><td>#</td><td>#</td><td>1.76</td><td>1.76</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
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<tr><td>MCA$^{(c)}$</td><td>2.4</td><td>2.4</td><td>2.4</td><td>#</td><td>#</td><td>#</td><td>#</td><td>2.4</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
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<tr><td>CuN (as Cu metal)(c)</td><td>0.060</td><td>0.060</td><td>#</td><td>#</td><td>0.060</td><td>#</td><td>0.060</td><td>0.060</td><td>0.060</td><td>R</td><td>0.060</td><td>0.060</td><td>0.060</td><td>0.060</td></tr>
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<tr><td>ACQ-A(c)</td><td>0.40</td><td>0.40</td><td>0.40</td><td>0.40</td><td>0.40</td><td>#</td><td>0.40</td><td>0.40</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>ACQ-B(c)</td><td>0.40</td><td>0.40</td><td>#</td><td>#</td><td>0.40</td><td>#</td><td>0.40</td><td>0.40</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>ACQ-C(c)</td><td>0.40</td><td>0.40</td><td>#</td><td>0.40</td><td>#</td><td>0.40</td><td>0.40</td><td>0.40</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>ACQ-D(c)</td><td>0.40</td><td>0.40</td><td>0.40</td><td>0.40</td><td>0.40</td><td>#</td><td>0.40</td><td>0.40</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>ACZA(c)</td><td>0.40</td><td>0.40</td><td>#</td><td>0.40</td><td>0.40</td><td>0.40</td><td>0.40</td><td>0.40</td><td>0.40</td><td>0.40</td><td colspan="2">0.40</td><td>#</td><td>0.40</td></tr>
<tr><td>CA-B(c)</td><td>0.21</td><td>0.21</td><td>0.21</td><td>#</td><td>#</td><td>#</td><td>0.21</td><td>0.21</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>CA-C(c)</td><td>0.15</td><td>0.15</td><td>0.15</td><td>#</td><td>#</td><td>#</td><td>0.15</td><td>0.15</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>CCA(c)</td><td>0.40</td><td>0.40</td><td>#</td><td>0.40</td><td>0.40</td><td>0.40</td><td>0.40</td><td>0.40</td><td>0.40</td><td>0.40</td><td colspan="2">0.40</td><td>#</td><td>0.40</td></tr>
<tr><td>CuN-W(c)</td><td>0.11</td><td>0.11</td><td>0.11</td><td>0.11</td><td>#</td><td>#</td><td>0.11</td><td>0.11</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>KDS(c)</td><td>0.47</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>0.47</td><td>0.47</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>MCA(c)</td><td>0.15</td><td>0.15</td><td>0.15</td><td>#</td><td>#</td><td>#</td><td>#</td><td>0.15</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
<tr><td>MCA-C(c)</td><td>0.15</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>0.15</td><td>#</td><td>#</td><td colspan="2">#</td><td>#</td><td>#</td></tr>
</table>
Attachment(s): <i><u>ComSpec A SYP DCOI-C supporting data revised 7-13-22.pdf</u></i>, <i><u>ComSpec A SYP DCOI-C Supporting data.pdf</u></i>
</td>
<td></td>
</tr>
<tr>
<td>1232</td>
<td>AWPA U1 COMM SPEC A 22 SECTION 3.0 [Table Data]21</td>
<td>Andy Zahora: UC4B and UC4C retention requirements are the same as for UC4A, which already exist for DCOI-A, therefor there is no further treatment data required for DCOI-A use</td>
<td>
<table>
<tr><td>kg/m³
(SI units)</td><td colspan="4">Pines</td><td>Spruce</td><td rowspan="2">Spruce-Pine-Fir West</td><td rowspan="2">Coastal Douglas-fir(a)</td><td rowspan="2">Hem-fir
Hem-fir North
Eastern Hemlock
Subalpine Fir</td><td rowspan="2">Redwood</td></tr>
<tr><td>Preservative</td><td>Southern
Mixed Southern
Radiata, Patula
Caribbean</td><td>Ponderosa
Red
Eastern White</td><td>Scots Pine-Ger
Scots Pine-Swe</td><td>Jack
Lodgepole</td><td>Western White
Engelmann
Sitka Spruce</td></tr>
<tr><td>CR (as solution)</td><td>160</td><td>160</td><td>#</td><td>160</td><td>160</td><td>#</td><td>160</td><td>160</td><td>160</td></tr>
<tr><td>CR-S (as solution)</td><td>160</td><td>160</td><td>#</td><td>160</td><td>160</td><td>#</td><td>160</td><td>160</td><td>160</td></tr>
</table>
</td>
<td></td>
</tr>
</table>

in these use categories.

CR-PS (as solution)	160	160	#	160	160	#	160	160	160
CuN (as Cu metal)$^{(b)}$	1.2	1.2	#	#	1.2	#	1.2	1.2	#
DCOI-A	#2.7	#	#	#	#	#	2.7	#	#
PCP-A	8.0	8.0	#	8.0	8.0	#	8.0	8.0	8.0
PCP-C	8.0	8.0	#	8.0	8.0	#	8.0	8.0	8.0
ACQ-B$^{(b)}$	9.6	9.6	#	#	9.6	#	9.6	9.6	#
ACQ-C$^{(b)}$	9.6	9.6	9.6	9.6	9.6	9.6	#	9.6	#
ACQ-D$^{(b)}$	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	#
ACZA$^{(b)}$	9.6	9.6	#	9.6	9.6	9.6	9.6	9.6	9.6
CA-B$^{(b)}$	5.0	5.0	5.0	5.0	#	#	5.0	5.0	#
CA-C$^{(b)}$	5.0	5.0	5.0	#	#	#	5.0	5.0	#
CCA$^{(b)}$	9.6	9.6	#	9.6	9.6	9.6	9.6	9.6	9.6
MCA$^{(b)}$	5.0	5.0	5.0	#	#	#	#	5.0	#
MCA-C$^{(b)}$	5.0	#	#	#	#	#	#	5.0	#

1243

AWPA U1 COMM SPEC A 22 SECTION 3.0 [Table Data]21

Andy Zahora: The attached file â€œComSpec A SYP DCOI-C Supporting Data.pdfâ€□ contains the same data that is being supplied to Subcommittee T8 for inclusion of DCOI-C into Commodity Specification F, Tables 3.3 for laminations treated prior to assembly. This data also shows that DCOI-C can meet all requirements for Sawn Products. DCOI retentions have been set at 1/3rd that for PCP, which for UC4C sawn products is set at 0.50 pcf. The attached data shows that DCOI-C retentions were consistently above 0.17 pcf in the Â½-1â€□ assay zone,

kg/m^3 (SI units)	**Pines**				**Spruce**				
Preservative	Southern Mixed Southern Radiata, Patula Caribbean	Ponderosa Red Eastern White	Scots Pine-Ger Scots Pine-Swe	Jack Lodgepole	Western White Engelmann Sitka Spruce	Spruce-Pine-Fir West	Coastal Douglas-fir$^{(a)}$	Hem-fir Hem-fir North Eastern Hemlock Subalpine Fir	Redwood
CR (as solution)	160	160	#	160	160	#	160	160	160
CR-S (as solution)	160	160	#	160	160	#	160	160	160
CR-PS (as solution)	160	160	#	160	160	#	160	160	160
CuN (as Cu metal)$^{(b)}$	1.2	1.2	#	#	1.2	#	1.2	1.2	#
DCOI-A	#	#	#	#	#	#	2.7	#	#
DCOI-C	2.7								
PCP-A	8.0	8.0	#	8.0	8.0	#	8.0	8.0	8.0
PCP-C	8.0	8.0	#	8.0	8.0	#	8.0	8.0	8.0
ACQ-B$^{(b)}$	9.6	9.6	#	#	9.6	#	9.6	9.6	#
ACQ-C$^{(b)}$	9.6	9.6	9.6	9.6	9.6	9.6	#	9.6	#
ACQ-D$^{(b)}$	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	#
ACZA$^{(b)}$	9.6	9.6	#	9.6	9.6	9.6	9.6	9.6	9.6
CA-B$^{(b)}$	5.0	5.0	5.0	5.0	#	#	5.0	5.0	#
CA-C$^{(b)}$	5.0	5.0	5.0	#	#	#	5.0	5.0	#
CCA$^{(b)}$	9.6	9.6	#	9.6	9.6	9.6	9.6	9.6	9.6
MCA$^{(b)}$	5.0	5.0	5.0	#	#	#	#	5.0	#
MCA-C$^{(b)}$	5.0	#	#	#	#	#	#	5.0	#

Attachment(s): *ComSpec A SYP DCOI-C supporting data revised 7-13-22.pdf*, *ComSpec A SYP DCOI-C Supporting data.pdf*

<table>
<tr><td></td><td></td><td>and should easily satisfy retentions in the lumber assay zone of 0-0.6â€□ assay zone. The penetration results also easily satisfied the sawn products requirements of 2.5 inch or 85% of the sapwood.</td><td></td><td></td></tr>
<tr><td>1340</td><td>AWPA U1 COMM SPEC A 22 SECTION 3.0 [Table Data]21</td><td>**AWPA Staff:** Consolidate from 1232 & 1243</td><td>
<table>
<tr><td>**kg/m^3** (SI units)</td><td colspan="4">**Pines**</td><td>**Spruce**</td><td></td><td></td><td>Hem-fir
Hem-fir North
Eastern Hemlock
Subalpine Fir</td><td></td></tr>
<tr><td>**Preservative**</td><td>Southern
Mixed Southern
Radiata, Patula
Caribbean</td><td>Ponderosa
Red
Eastern White</td><td>Scots Pine-Ger
Scots Pine-Swe</td><td>Jack
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Engelmann
Sitka Spruce</td><td>Spruce-Pine-Fir West</td><td>Coastal Douglas-fir(a)</td><td></td><td>Redwood</td></tr>
<tr><td>**CR** (as solution)</td><td>160</td><td>160</td><td>#</td><td>160</td><td>160</td><td>#</td><td>160</td><td>160</td><td>160</td></tr>
<tr><td>**CR-S** (as solution)</td><td>160</td><td>160</td><td>#</td><td>160</td><td>160</td><td>#</td><td>160</td><td>160</td><td>160</td></tr>
<tr><td>**CR-PS** (as solution)</td><td>160</td><td>160</td><td>#</td><td>160</td><td>160</td><td>#</td><td>160</td><td>160</td><td>160</td></tr>
<tr><td>**CuN** (as Cu metal)(b)</td><td>1.2</td><td>1.2</td><td>#</td><td>#</td><td>1.2</td><td>#</td><td>1.2</td><td>1.2</td><td>#</td></tr>
<tr><td>**DCOI-A**</td><td>#2.7</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>2.7</td><td>#</td><td>#</td></tr>
<tr><td>**DCOI-C**</td><td>2.7</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td></tr>
<tr><td>**PCP-A**</td><td>8.0</td><td>8.0</td><td>#</td><td>8.0</td><td>8.0</td><td>#</td><td>8.0</td><td>8.0</td><td>8.0</td></tr>
<tr><td>**PCP-C**</td><td>8.0</td><td>8.0</td><td>#</td><td>8.0</td><td>8.0</td><td>#</td><td>8.0</td><td>8.0</td><td>8.0</td></tr>
<tr><td>**ACQ-B(b)**</td><td>9.6</td><td>9.6</td><td>#</td><td>#</td><td>9.6</td><td>#</td><td>9.6</td><td>9.6</td><td>#</td></tr>
<tr><td>**ACQ-C(b)**</td><td>9.6</td><td>9.6</td><td>9.6</td><td>9.6</td><td>9.6</td><td>9.6</td><td>#</td><td>9.6</td><td>#</td></tr>
<tr><td>**ACQ-D(b)**</td><td>9.6</td><td>9.6</td><td>9.6</td><td>9.6</td><td>9.6</td><td>9.6</td><td>9.6</td><td>9.6</td><td>#</td></tr>
<tr><td>**ACZA(b)**</td><td>9.6</td><td>9.6</td><td>#</td><td>9.6</td><td>9.6</td><td>9.6</td><td>9.6</td><td>9.6</td><td>9.6</td></tr>
<tr><td>**CA-B(b)**</td><td>5.0</td><td>5.0</td><td>5.0</td><td>5.0</td><td>#</td><td>#</td><td>5.0</td><td>5.0</td><td>#</td></tr>
<tr><td>**CA-C(b)**</td><td>5.0</td><td>5.0</td><td>5.0</td><td>#</td><td>#</td><td>#</td><td>5.0</td><td>5.0</td><td>#</td></tr>
<tr><td>**CCA(b)**</td><td>9.6</td><td>9.6</td><td>#</td><td>9.6</td><td>9.6</td><td>9.6</td><td>9.6</td><td>9.6</td><td>9.6</td></tr>
<tr><td>**MCA(b)**</td><td>5.0</td><td>5.0</td><td>5.0</td><td>#</td><td>#</td><td>#</td><td>#</td><td>5.0</td><td>#</td></tr>
<tr><td>**MCA-C(b)**</td><td>5.0</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>5.0</td><td>#</td></tr>
</table>
</td><td></td></tr>
<tr><td>1233</td><td>AWPA U1 COMM SPEC A 22 SECTION 3.0 [Table Data]23</td><td>**Andy Zahora:** UC4B and UC4C retention requirements are the same as for UC4A, which already exist for DCOI-A, therefor there is no further treatment data required for DCOI-A use</td><td>
<table>
<tr><td>**pcf** (US Customary units)</td><td colspan="4">**Pines**</td><td>**Spruce**</td><td></td><td></td><td>Hem-fir
Hem-fir North
Eastern Hemlock
Subalpine Fir</td><td></td></tr>
<tr><td>**Preservative**</td><td>Southern
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Scots Pine-Swe</td><td>Jack
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Engelmann
Sitka Spruce</td><td>Spruce-Pine-Fir West</td><td>Coastal Douglas-fir(a)</td><td></td><td>Redwood</td></tr>
<tr><td>**CR** (as solution)</td><td>10.0</td><td>10.0</td><td>#</td><td>10.0</td><td>10.0</td><td>#</td><td>10.0</td><td>10.0</td><td>10.0</td></tr>
</table>
</td><td></td></tr>
</table>

in these use categories.

CR-S (as solution)	10.0	10.0	#	10.0	10.0	#	10.0	10.0	10.0
CR-PS (as solution)	10.0	10.0	#	10.0	10.0	#	10.0	10.0	10.0
CuN (as Cu metal)$^{(b)}$	0.075	0.075	#	#	0.075	#	0.075	0.075	#
DCOI-A	#0.17	#	#	#	#	#	0.17	#	#
PCP-A	0.50	0.50	#	0.50	0.50	#	0.50	0.50	0.50
PCP-C	0.50	0.50	#	0.50	0.50	#	0.50	0.50	0.50
ACQ-B$^{(b)}$	0.60	0.60	#	#	0.60	#	0.60	0.60	#
ACQ-C$^{(b)}$	0.60	0.60	0.60	0.60	0.60	0.60	#	0.60	#
ACQ-D$^{(b)}$	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	#
ACZA$^{(b)}$	0.60	0.60	#	0.60	0.60	0.60	0.60	0.60	0.60
CA-B$^{(b)}$	0.31	0.31	0.31	0.31	#	#	0.31	0.31	#
CA-C$^{(b)}$	0.31	0.31	0.31	#	#	#	0.31	0.31	#
CCA$^{(b)}$	0.60	0.60	#	0.60	0.60	0.60	0.60	0.60	0.60
MCA$^{(b)}$	0.31	0.31	0.31	#	#	#	#	0.31	#
MCA-C$^{(b)}$	0.31	#	#	#	#	#	#	0.31	#

1244

AWPA U1 COMM SPEC A 22 SECTION 3.0 [Table Data]23

Andy Zahora: The attached file â€œComSpec A SYP DCOI-C Supporting Data.pdfâ€□ contains the same data that is being supplied to Subcommittee T8 for inclusion of DCOI-C into Commodity Specification F, Tables 3.3 for laminations treated prior to assembly. This data also shows that DCOI-C can meet all requirements for Sawn Products. DCOI retentions have been set at 1/3rd that for PCP, which for UC4C sawn products is set at 0.50 pcf. The attached data shows that DCOI-C retentions were consistently above 0.17 pcf in the

pcf (US Customary units)	**Pines**				**Spruce**				
Preservative	Southern Mixed Southern Radiata, Patula Caribbean	Ponderosa Red Eastern White	Scots Pine-Ger Scots Pine-Swe	Jack Lodgepole	Western White Engelmann Sitka Spruce	Spruce-Pine-Fir West	Coastal Douglas-fir$^{(a)}$	Hem-fir Hem-fir North Eastern Hemlock Subalpine Fir	Redwood
CR (as solution)	10.0	10.0	#	10.0	10.0	#	10.0	10.0	10.0
CR-S (as solution)	10.0	10.0	#	10.0	10.0	#	10.0	10.0	10.0
CR-PS (as solution)	10.0	10.0	#	10.0	10.0	#	10.0	10.0	10.0
CuN (as Cu metal)$^{(b)}$	0.075	0.075	#	#	0.075	#	0.075	0.075	#
DCOI-A	#	#	#	#	#	#	0.17	#	#
DCOI-C	0.17								
PCP-A	0.50	0.50	#	0.50	0.50	#	0.50	0.50	0.50
PCP-C	0.50	0.50	#	0.50	0.50	#	0.50	0.50	0.50
ACQ-B$^{(b)}$	0.60	0.60	#	#	0.60	#	0.60	0.60	#
ACQ-C$^{(b)}$	0.60	0.60	0.60	0.60	0.60	0.60	#	0.60	#
ACQ-D$^{(b)}$	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	#
ACZA$^{(b)}$	0.60	0.60	#	0.60	0.60	0.60	0.60	0.60	0.60
CA-B$^{(b)}$	0.31	0.31	0.31	0.31	#	#	0.31	0.31	#
CA-C$^{(b)}$	0.31	0.31	0.31	#	#	#	0.31	0.31	#
CCA$^{(b)}$	0.60	0.60	#	0.60	0.60	0.60	0.60	0.60	0.60
MCA$^{(b)}$	0.31	0.31	0.31	#	#	#	#	0.31	#
MCA-C$^{(b)}$	0.31	#	#	#	#	#	#	0.31	#

Attachment(s): *ComSpec A SYP DCOI-C supporting data revised 7-13-22.pdf*, *ComSpec A SYP DCOI-C Supporting data.pdf*

<table>
<tr><td></td><td></td><td>Â½-1â€□ assay zone, and should easily satisfy retentions in the lumber assay zone of 0-0.6â€□ assay zone. The penetration results also easily satisfied the sawn products requirements of 2.5 inch or 85% of the sapwood.</td><td></td><td></td></tr>
<tr><td>1341</td><td>AWPA U1 COMM SPEC A 22 SECTION 3.0 [Table Data]23</td><td>**AWPA Staff:** Consolidated from 1233 & 1244</td><td>
<table>
<tr><th>pcf (US Customary units)</th><th colspan="4">Pines</th><th>Spruce</th><th></th><th></th><th>Hem-fir</th><th></th></tr>
<tr><th>Preservative</th><th>Southern
Mixed Southern
Radiata, Patula
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Eastern Hemlock
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<tr><td>**CR** (as solution)</td><td>10.0</td><td>10.0</td><td>#</td><td>10.0</td><td>10.0</td><td>#</td><td>10.0</td><td>10.0</td><td>10.0</td></tr>
<tr><td>**CR-S** (as solution)</td><td>10.0</td><td>10.0</td><td>#</td><td>10.0</td><td>10.0</td><td>#</td><td>10.0</td><td>10.0</td><td>10.0</td></tr>
<tr><td>**CR-PS** (as solution)</td><td>10.0</td><td>10.0</td><td>#</td><td>10.0</td><td>10.0</td><td>#</td><td>10.0</td><td>10.0</td><td>10.0</td></tr>
<tr><td>**CuN** (as Cu metal)(b)</td><td>0.075</td><td>0.075</td><td>#</td><td>#</td><td>0.075</td><td>#</td><td>0.075</td><td>0.075</td><td>#</td></tr>
<tr><td>**DCOI-A**</td><td>#0.17</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>0.17</td><td>#</td><td>#</td></tr>
<tr><td>**DCOI-C**</td><td>0.17</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td></tr>
<tr><td>**PCP-A**</td><td>0.50</td><td>0.50</td><td>#</td><td>0.50</td><td>0.50</td><td>#</td><td>0.50</td><td>0.50</td><td>0.50</td></tr>
<tr><td>**PCP-C**</td><td>0.50</td><td>0.50</td><td>#</td><td>0.50</td><td>0.50</td><td>#</td><td>0.50</td><td>0.50</td><td>0.50</td></tr>
<tr><td>**ACQ-B(b)**</td><td>0.60</td><td>0.60</td><td>#</td><td>#</td><td>0.60</td><td>#</td><td>0.60</td><td>0.60</td><td>#</td></tr>
<tr><td>**ACQ-C(b)**</td><td>0.60</td><td>0.60</td><td>0.60</td><td>0.60</td><td>0.60</td><td>0.60</td><td>#</td><td>0.60</td><td>#</td></tr>
<tr><td>**ACQ-D(b)**</td><td>0.60</td><td>0.60</td><td>0.60</td><td>0.60</td><td>0.60</td><td>0.60</td><td>0.60</td><td>0.60</td><td>#</td></tr>
<tr><td>**ACZA(b)**</td><td>0.60</td><td>0.60</td><td>#</td><td>0.60</td><td>0.60</td><td>0.60</td><td>0.60</td><td>0.60</td><td>0.60</td></tr>
<tr><td>**CA-B(b)**</td><td>0.31</td><td>0.31</td><td>0.31</td><td>0.31</td><td>#</td><td>#</td><td>0.31</td><td>0.31</td><td>#</td></tr>
<tr><td>**CA-C(b)**</td><td>0.31</td><td>0.31</td><td>0.31</td><td>#</td><td>#</td><td>#</td><td>0.31</td><td>0.31</td><td>#</td></tr>
<tr><td>**CCA(b)**</td><td>0.60</td><td>0.60</td><td>#</td><td>0.60</td><td>0.60</td><td>0.60</td><td>0.60</td><td>0.60</td><td>0.60</td></tr>
<tr><td>**MCA(b)**</td><td>0.31</td><td>0.31</td><td>0.31</td><td>#</td><td>#</td><td>#</td><td>#</td><td>0.31</td><td>#</td></tr>
<tr><td>**MCA-C(b)**</td><td>0.31</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>0.31</td><td>#</td></tr>
</table>
</td><td></td></tr>
<tr><td>1234</td><td>AWPA U1 COMM SPEC A 22 SECTION 3.0 [Table Data]25</td><td>**Andy Zahora:** UC4B and UC4C retention requirements are the same as for UC4A, which already exist for DCOI-A, therefor there is no further treatment data</td><td>
<table>
<tr><th>kg/m^3 (SI units)</th><th colspan="4">Pines</th><th>Spruce</th><th></th><th></th><th>Hem-fir</th><th></th></tr>
<tr><th>Preservative</th><th>Southern
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Eastern Hemlock
Subalpine Fir</th><th>Redwood</th></tr>
<tr><td>**CR** (as solution)</td><td>192</td><td>192</td><td>#</td><td>192</td><td>192</td><td>#</td><td>192</td><td>192</td><td>192</td></tr>
</table>
</td><td></td></tr>
</table>

required for DCOI-A use in these use categories.

CR-S (as solution)	192	192	#	192	192	#	192	192	192
CR-PS (as solution)	192	192	#	192	192	#	192	192	192
CuN (as Cu metal)$^{(b)}$	1.2	1.2	#	#	1.2	#	1.2	1.2	#
DCOI-A	#2.7	#	#	#	#	#	2.7	#	#
PCP-A	8.0	8.0	#	8.0	8.0	#	8.0	8.0	8.0
PCP-C	8.0	8.0	#	8.0	8.0	#	8.0	8.0	8.0
ACQ-B$^{(b)}$	9.6	#	#	#	9.6	#	9.6	9.6	#
ACQ-C$^{(b)}$	#	9.6	#	9.6	#	9.6	#	9.6	#
ACQ-D$^{(b)}$	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	#
ACZA$^{(b)}$	9.6	9.6	#	9.6	9.6	9.6	9.6	9.6	9.6
CA-B$^{(b)}$	5.0	5.0	5.0	#	#	#	5.0	5.0	#
CA-C$^{(b)}$	5.0	5.0	5.0	#	#	#	5.0	5.0	#
CCA$^{(b)}$	9.6	9.6	#	9.6	9.6	9.6	9.6	9.6	9.6
MCA$^{(b)}$	5.0	5.0	5.0	#	#	#	#	5.0	#
MCA-C$^{(b)}$	5.0	#	#	#	#	#	#	5.0	#

1245 AWPA U1 COMM SPEC A 22 SECTION 3.0 [Table Data]25

Andy Zahora: The attached file â€œComSpec A SYP DCOI-C Supporting Data.pdfâ€□ contains the same data that is being supplied to Subcommittee T8 for inclusion of DCOI-C into Commodity Specification F, Tables 3.3 for laminations treated prior to assembly. This data also shows that DCOI-C can meet all requirements for Sawn Products. DCOI retentions have been set at 1/3rd that for PCP, which for UC4C sawn products is set at 0.50 pcf. The attached data shows that DCOI-C retentions were consistently above 0.17 pcf in the

kg/m^3 (SI units)	**Pines**				**Spruce**			Hem-fir	
Preservative	Southern Mixed Southern Radiata Caribbean	Ponderosa Red Eastern White	Scots Pine-Ger Scots Pine-Swe	Jack Lodgepole	Western White Engelmann Sitka Spruce	Spruce-Pine-Fir West	Coastal Douglas-fir$^{(a)}$	Hem-fir North Eastern Hemlock Subalpine Fir	Redwood
CR (as solution)	192	192	#	192	192	#	192	192	192
CR-S (as solution)	192	192	#	192	192	#	192	192	192
CR-PS (as solution)	192	192	#	192	192	#	192	192	192
CuN (as Cu metal)$^{(b)}$	1.2	1.2	#	#	1.2	#	1.2	1.2	#
DCOI-A	#	#	#	#	#	#	2.7	#	#
DCOI-C	2.7								
PCP-A	8.0	8.0	#	8.0	8.0	#	8.0	8.0	8.0
PCP-C	8.0	8.0	#	8.0	8.0	#	8.0	8.0	8.0
ACQ-B$^{(b)}$	9.6	#	#	#	9.6	#	9.6	9.6	#
ACQ-C$^{(b)}$	#	9.6	#	9.6	#	9.6	#	9.6	#
ACQ-D$^{(b)}$	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	#
ACZA$^{(b)}$	9.6	9.6	#	9.6	9.6	9.6	9.6	9.6	9.6
CA-B$^{(b)}$	5.0	5.0	5.0	#	#	#	5.0	5.0	#
CA-C$^{(b)}$	5.0	5.0	5.0	#	#	#	5.0	5.0	#
CCA$^{(b)}$	9.6	9.6	#	9.6	9.6	9.6	9.6	9.6	9.6
MCA$^{(b)}$	5.0	5.0	5.0	#	#	#	#	5.0	#
MCA-C$^{(b)}$	5.0	#	#	#	#	#	#	5.0	#

Attachment(s): *ComSpec A SYP DCOI-C supporting data revised 7-13-22.pdf*, *ComSpec A SYP DCOI-C Supporting data.pdf*

<table>
<tr><td></td><td></td><td>Â½-1â€□ assay zone, and should easily satisfy retentions in the lumber assay zone of 0-0.6â€□ assay zone. The penetration results also easily satisfied the sawn products requirements of 2.5 inch or 85% of the sapwood.</td><td></td><td></td></tr>
<tr><td>1342</td><td>AWPA U1 COMM SPEC A 22 SECTION 3.0 [Table Data]25</td><td>Andy Zahora: Consolidate from 1234 & 1245</td><td>
<table>
<tr><td>kg/m^3 (SI units)</td><td colspan="4">Pines</td><td>Spruce</td><td></td><td></td><td>Hem-fir</td><td></td></tr>
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<tr><td>CR (as solution)</td><td>192</td><td>192</td><td>#</td><td>192</td><td>192</td><td>#</td><td>192</td><td>192</td><td>192</td></tr>
<tr><td>CR-S (as solution)</td><td>192</td><td>192</td><td>#</td><td>192</td><td>192</td><td>#</td><td>192</td><td>192</td><td>192</td></tr>
<tr><td>CR-PS (as solution)</td><td>192</td><td>192</td><td>#</td><td>192</td><td>192</td><td>#</td><td>192</td><td>192</td><td>192</td></tr>
<tr><td>CuN (as Cu metal)(b)</td><td>1.2</td><td>1.2</td><td>#</td><td>#</td><td>1.2</td><td>#</td><td>1.2</td><td>1.2</td><td>#</td></tr>
<tr><td>DCOI-A</td><td>#2.7</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>2.7</td><td>#</td><td>#</td></tr>
<tr><td>DCOI-C</td><td>2.7</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td></tr>
<tr><td>PCP-A</td><td>8.0</td><td>8.0</td><td>#</td><td>8.0</td><td>8.0</td><td>#</td><td>8.0</td><td>8.0</td><td>8.0</td></tr>
<tr><td>PCP-C</td><td>8.0</td><td>8.0</td><td>#</td><td>8.0</td><td>8.0</td><td>#</td><td>8.0</td><td>8.0</td><td>8.0</td></tr>
<tr><td>ACQ-B(b)</td><td>9.6</td><td>#</td><td>#</td><td>#</td><td>9.6</td><td>#</td><td>9.6</td><td>9.6</td><td>#</td></tr>
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<tr><td>ACQ-D(b)</td><td>9.6</td><td>9.6</td><td>9.6</td><td>9.6</td><td>9.6</td><td>9.6</td><td>9.6</td><td>9.6</td><td>#</td></tr>
<tr><td>ACZA(b)</td><td>9.6</td><td>9.6</td><td>#</td><td>9.6</td><td>9.6</td><td>9.6</td><td>9.6</td><td>9.6</td><td>9.6</td></tr>
<tr><td>CA-B(b)</td><td>5.0</td><td>5.0</td><td>5.0</td><td>#</td><td>#</td><td>#</td><td>5.0</td><td>5.0</td><td>#</td></tr>
<tr><td>CA-C(b)</td><td>5.0</td><td>5.0</td><td>5.0</td><td>#</td><td>#</td><td>#</td><td>5.0</td><td>5.0</td><td>#</td></tr>
<tr><td>CCA(b)</td><td>9.6</td><td>9.6</td><td>#</td><td>9.6</td><td>9.6</td><td>9.6</td><td>9.6</td><td>9.6</td><td>9.6</td></tr>
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<tr><td>1235</td><td>AWPA U1 COMM SPEC A 22 SECTION 3.0 [Table Data]27</td><td>Andy Zahora: UC4B and UC4C retention requirements are the same as for UC4A, which already exist for DCOI-A, therefor there is no further treatment data</td><td>
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<tr><td>pcf (US Customary units)</td><td colspan="4">Pines</td><td>Spruce</td><td></td><td></td><td>Hem-fir</td><td></td></tr>
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Eastern Hemlock
Subalpine Fir</td><td>Redwood</td></tr>
<tr><td>CR (as solution)</td><td>12.0</td><td>12.0</td><td>#</td><td>12.0</td><td>12.0</td><td>#</td><td>12.0</td><td>12.0</td><td>12.0</td></tr>
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<table>
<tr>
<td></td>
<td></td>
<td>required for DCOI-A use in these use categories.</td>
<td>
<table>
<tr><td>**CR-S** (as solution)</td><td>12.0</td><td>12.0</td><td>#</td><td>12.0</td><td>12.0</td><td>#</td><td>12.0</td><td>12.0</td><td>12.0</td></tr>
<tr><td>**CR-PS** (as solution)</td><td>12.0</td><td>12.0</td><td>#</td><td>12.0</td><td>12.0</td><td>#</td><td>12.0</td><td>12.0</td><td>12.0</td></tr>
<tr><td>**CuN** (as Cu metal)(b)</td><td>0.075</td><td>0.075</td><td>#</td><td>#</td><td>0.075</td><td>#</td><td>0.075</td><td>0.075</td><td>#</td></tr>
<tr><td>**DCOI-A**</td><td>#0.17</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>0.17</td><td>#</td><td>#</td></tr>
<tr><td>**PCP-A**</td><td>0.50</td><td>0.50</td><td>#</td><td>0.50</td><td>0.50</td><td>#</td><td>0.50</td><td>0.50</td><td>0.50</td></tr>
<tr><td>**PCP-C**</td><td>0.50</td><td>0.50</td><td>#</td><td>0.50</td><td>0.50</td><td>#</td><td>0.50</td><td>0.50</td><td>0.50</td></tr>
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<tr><td>**MCA(b)**</td><td>0.31</td><td>0.31</td><td>0.31</td><td>#</td><td>#</td><td>#</td><td>#</td><td>0.31</td><td>#</td></tr>
<tr><td>**MCA-C(b)**</td><td>0.31</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>0.31</td><td>#</td></tr>
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<td>1246</td>
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Sitka Spruce</th><th rowspan="2">Hem-fir North
Eastern Hemlock
Subalpine Fir</th></tr>
<tr><th>**Preservative**</th></tr>
<tr><td>**CR** (as solution)</td><td>12.0</td><td>12.0</td><td>#</td><td>12.0</td><td>12.0</td><td>#</td><td>12.0</td><td>12.0</td><td>12.0</td></tr>
<tr><td>**CR-S** (as solution)</td><td>12.0</td><td>12.0</td><td>#</td><td>12.0</td><td>12.0</td><td>#</td><td>12.0</td><td>12.0</td><td>12.0</td></tr>
<tr><td>**CR-PS** (as solution)</td><td>12.0</td><td>12.0</td><td>#</td><td>12.0</td><td>12.0</td><td>#</td><td>12.0</td><td>12.0</td><td>12.0</td></tr>
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<tr><td>**DCOI-A**</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>0.17</td><td>#</td><td>#</td></tr>
<tr><td>**DCOI-C**</td><td>0.17</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>**ACZA(b)**</td><td>0.60</td><td>0.60</td><td>#</td><td>0.60</td><td>0.60</td><td>0.60</td><td>0.60</td><td>0.60</td><td>0.60</td></tr>
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<tr><td>**MCA-C(b)**</td><td>0.31</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>0.31</td><td>#</td></tr>
</table>
Attachment(s): *ComSpec A SYP DCOI-C supporting data revised 7-13-22.pdf*, *ComSpec A SYP DCOI-C Supporting data.pdf*
</td>
<td></td>
</tr>
</table>

<table>
<tr><td></td><td></td><td>Â½-1â€□ assay zone, and should easily satisfy retentions in the lumber assay zone of 0-0.6â€□ assay zone. The penetration results also easily satisfied the sawn products requirements of 2.5 inch or 85% of the sapwood.</td><td></td><td></td></tr>
<tr><td>1343</td><td>AWPA U1 COMM SPEC A 22 SECTION 3.0 [Table Data]27</td><td>**AWPA Staff:** Consolidate from 1235 & 1246</td><td>
<table>
<tr><td>**pcf** (US Customary units)</td><td colspan="4">**Pines**</td><td>**Spruce**</td><td></td><td></td><td>Hem-fir</td><td></td></tr>
<tr><td>**Preservative**</td><td>Southern
Mixed Southern
Radiata
Caribbean</td><td>Ponderosa
Red
Eastern White</td><td>Scots Pine-Ger
Scots Pine-Swe</td><td>Jack
Lodgepole</td><td>Western White
Engelmann
Sitka Spruce</td><td>Spruce-Pine-Fir West</td><td>Coastal Douglas-fir(a)</td><td>Hem-fir North
Eastern Hemlock
Subalpine Fir</td><td>Redwood</td></tr>
<tr><td>**CR** (as solution)</td><td>12.0</td><td>12.0</td><td>#</td><td>12.0</td><td>12.0</td><td>#</td><td>12.0</td><td>12.0</td><td>12.0</td></tr>
<tr><td>**CR-S** (as solution)</td><td>12.0</td><td>12.0</td><td>#</td><td>12.0</td><td>12.0</td><td>#</td><td>12.0</td><td>12.0</td><td>12.0</td></tr>
<tr><td>**CR-PS** (as solution)</td><td>12.0</td><td>12.0</td><td>#</td><td>12.0</td><td>12.0</td><td>#</td><td>12.0</td><td>12.0</td><td>12.0</td></tr>
<tr><td>**CuN** (as Cu metal)(b)</td><td>0.075</td><td>0.075</td><td>#</td><td>#</td><td>0.075</td><td>#</td><td>0.075</td><td>0.075</td><td>#</td></tr>
<tr><td>**DCOI-A**</td><td>#0.17</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>0.17</td><td>#</td><td>#</td></tr>
<tr><td>**DCOI-C**</td><td>0.17</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td></tr>
<tr><td>**PCP-A**</td><td>0.50</td><td>0.50</td><td>#</td><td>0.50</td><td>0.50</td><td>#</td><td>0.50</td><td>0.50</td><td>0.50</td></tr>
<tr><td>**PCP-C**</td><td>0.50</td><td>0.50</td><td>#</td><td>0.50</td><td>0.50</td><td>#</td><td>0.50</td><td>0.50</td><td>0.50</td></tr>
<tr><td>**ACQ-B(b)**</td><td>0.60</td><td>#</td><td>#</td><td>#</td><td>0.60</td><td>#</td><td>0.60</td><td>0.60</td><td>#</td></tr>
<tr><td>**ACQ-C(b)**</td><td>#</td><td>0.60</td><td>#</td><td>0.60</td><td>#</td><td>0.60</td><td>#</td><td>0.60</td><td>#</td></tr>
<tr><td>**ACQ-D(b)**</td><td>0.60</td><td>0.60</td><td>0.60</td><td>0.60</td><td>0.60</td><td>0.60</td><td>0.60</td><td>0.60</td><td>#</td></tr>
<tr><td>**ACZA(b)**</td><td>0.60</td><td>0.60</td><td>#</td><td>0.60</td><td>0.60</td><td>0.60</td><td>0.60</td><td>0.60</td><td>0.60</td></tr>
<tr><td>**CA-B(b)**</td><td>0.31</td><td>0.31</td><td>0.31</td><td>#</td><td>#</td><td>#</td><td>0.31</td><td>0.31</td><td>#</td></tr>
<tr><td>**CA-C(b)**</td><td>0.31</td><td>0.31</td><td>0.31</td><td>#</td><td>#</td><td>#</td><td>0.31</td><td>0.31</td><td>#</td></tr>
<tr><td>**CCA(b)**</td><td>0.60</td><td>0.60</td><td>#</td><td>0.60</td><td>0.60</td><td>0.60</td><td>0.60</td><td>0.60</td><td>0.60</td></tr>
<tr><td>**MCA(b)**</td><td>0.31</td><td>0.31</td><td>0.31</td><td>#</td><td>#</td><td>#</td><td>#</td><td>0.31</td><td>#</td></tr>
<tr><td>**MCA-C(b)**</td><td>0.31</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>0.31</td><td>#</td></tr>
</table>
</td><td></td></tr>
<tr><td>1236</td><td>AWPA U1 COMM SPEC A 22 SECTION 4.3 [Table Data]</td><td>**Andy Zahora:** We put in for DCOI-A in Table 3.0 for use in UC4C exposures which also cover the requirements for this preservative to be acceptable for</td><td>
<table>
<tr><td>**Species**</td><td>**Preservatives**</td></tr>
<tr><td>Southern Pine</td><td>ACQ-B, ACQ-C, ACZA, CA-B, CA-C, CCA, CR, CR-S, CR-PS, CuN, DCOI-C, MCA, MCA-C, PCP-A, PCP-C</td></tr>
<tr><td>Coastal Douglas-fir</td><td>ACQ-B, ACQ-C, ACQ-D, ACZA, CA-B, CA-C, CCA, CR, CR-S, CR-PS, CuN, DCOI-A, PCP-A, PCP-C</td></tr>
<tr><td>Western Hemlock</td><td>ACQ-B, ACQ-C, ACZA, CA-B, CA-C, CCA, CR, CR-S, CR-PS, CuN, MCA, MCA-C, PCP-A, PCP-C</td></tr>
<tr><td>Hem-fir, Hem-Fir North</td><td>ACQ-C, CA-B, CA-C, MCA, MCA-C</td></tr>
</table>
</td><td></td></tr>
</table>

<table>
<tr><td></td><td></td><td>this these application.</td><td></td><td></td></tr>
<tr><td>1315</td><td>AWPA U1 COMM SPEC A 22 SECTION 4.3 [Table Data]</td><td>Bob Baeppler: The absence of DCOI-A is an oversight and same data can be used to justify its addition</td><td><table>
<tr><th>Species</th><th>Preservatives</th></tr>
<tr><td>Southern Pine</td><td>ACQ-B, ACQ-C, ACZA, CA-B, CA-C,
CCA, CR, CR-S, CR-PS, CuN, DCOI-A, MCA,
MCA-C, PCP-A, PCP-C</td></tr>
<tr><td>Coastal Douglas-fir</td><td>ACQ-B, ACQ-C, ACQ-D, ACZA,
CA-B, CA-C, CCA, CR, CR-S, CR-PS, CuN, DCOI-A, PCP-A, PCP-C</td></tr>
<tr><td>Western Hemlock</td><td>ACQ-B, ACQ-C, ACZA, CA-B, CA-C,
CCA, CR, CR-S, CR-PS, CuN, MCA,
MCA-C, PCP-A, PCP-C</td></tr>
<tr><td>Hem-fir,
Hem-Fir North</td><td>ACQ-C, CA-B, CA-C, MCA, MCA-C</td></tr>
</table></td><td></td></tr>
<tr><td>1344</td><td>AWPA U1 COMM SPEC A 22 SECTION 4.3 [Table Data]</td><td>AWPA Staff: Consolidate 1236 & 1315</td><td><table>
<tr><th>Species</th><th>Preservatives</th></tr>
<tr><td>Southern Pine</td><td>ACQ-B, ACQ-C, ACZA, CA-B, CA-C,
CCA, CR, CR-S, CR-PS, CuN, DCOI-A,
DCOI-C, MCA,
MCA-C, PCP-A, PCP-C</td></tr>
<tr><td>Coastal Douglas-fir</td><td>ACQ-B, ACQ-C, ACQ-D, ACZA,
CA-B, CA-C, CCA, CR, CR-S, CR-PS, CuN, DCOI-A, PCP-A, PCP-C</td></tr>
<tr><td>Western Hemlock</td><td>ACQ-B, ACQ-C, ACZA, CA-B, CA-C,
CCA, CR, CR-S, CR-PS, CuN, MCA,
MCA-C, PCP-A, PCP-C</td></tr>
<tr><td>Hem-fir,
Hem-Fir North</td><td>ACQ-C, CA-B, CA-C, MCA, MCA-C</td></tr>
</table></td><td></td></tr>
</table>

AWPA Technical Committee T-4
Fall 2022 Standardization Cycle

Ballot Opening/Closing Dates:	10/17/2022 to 11/16/2022
Items Subject to Recirculation:	N/A
Recirculation Ballot Opening/Closing:	N/A
Total Number Committee Members:	44
Number of Eligible Voters:	44
Number of Eligible Ballots Received:	36
Ballot Return Percentage:	81.8%
Deadline for Appeals:	N/A – No Unresolved Objections

AWPA Standard M26-17

22F-T4-M26: Proposal to Revise M26 BMP Guide Details

Proponent(s): Juliet Tang

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 36 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

ID	▲Item	Reason	Proposed Change	Committee Status
1269	AWPA M26 17	**Bob Baeppler:** No known issues with the existing standard.	**Additional Comment:** Reaffirm without Revisions	**Withdrawn: Not needed with accepted revision.**
1270	AWPA M26 17 SECTION 4.0 PARA 1	**Juliet Tang:** To avoid confusion with BMP Specificiers Guide	Although the mechanisms of preservative stabilization vary by preservative, in some cases post-treatment conditioning process can shorten the time needed for stabilization to occur and/or improve the resistance of the preservative to leaching. Guidelines for use of these processes are ~~specified~~ detailed in the Best Management Practices (BMP) Production Guide issued by the Western Wood Preservers Institute and the Southern Pressure Treaters Association in collaboration with other associations (see Sections 6.1 and 6.2).	
1271	AWPA M26 17	**Juliet Tang:** Updated reference for	**6.1** Best Management Practices Production Guide~~for the Use of Treated Wood in Aquatic and Wetland Environments~~. 2019~~1~~. Produced by the Western Wood Preservers Institute, Wood Preservation Canada,	

	SECTION 6.1	the BMP Production Guide.	Southern Pressure Treaters' Association, ~~and~~ Southern Forest Products Association, and the Creosote Council.	
1272	AWPA M26 17 SECTION 6.2	**Juliet Tang:** Updated link for BMP Production Guide	**6.2** https://preservedwood.org/portals/0/documents/BMP_Production_Guide.pdf ~~http://preservedwood.org/HowTo/BestManagementPractices.aspx~~	

AWPA Standard U1 Commodity Specification B-22

22F-T4-U1(B): Proposal to Revise U1 Comm Spec B

Proponent(s): Andy Zahora

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 36 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

<table>
<tr><th>ID</th><th>▲Item</th><th>Reason</th><th>Proposed Change</th><th>Committee Status</th></tr>
<tr><td>1247</td><td>AWPA U1 COMM SPEC B 22 SECTION 3.1.1 [Table Data]</td><td>Andy Zahora: Supporting data for including DCOI-A for lodgepole pine posts is attached as file â€œDCOI-C Lodgepole Pine Post Data.pdfâ€□. This data was previously used to support that DCOI-A could meet all the treatment requirements for lodgepole pine poles. This same data also shows that DCOI-C can satisfy all the requirements for lodgepole pine posts.</td><td>
<table>
<tr><th rowspan="2">Preservative</th><th colspan="6">Pines</th><th rowspan="2">Douglas-Fir</th><th rowspan="2">Western Hemlock</th><th rowspan="2">Western Larch</th></tr>
<tr><th>Southern</th><th>Ponderosa</th><th>Jack</th><th>Lodgepole</th><th>Red</th><th>Radiata</th></tr>
<tr><td colspan="10">Use Category 4A –kg/m^3</td></tr>
<tr><td>CR (a)</td><td>128</td><td>128</td><td>128</td><td>96</td><td>128</td><td>#</td><td>128</td><td>128</td><td>128</td></tr>
<tr><td>CR-S (a)</td><td>128</td><td>128</td><td>128</td><td>96</td><td>128</td><td>#</td><td>#</td><td>#</td><td>#</td></tr>
<tr><td>CR-PS (a)</td><td>128</td><td>128</td><td>128</td><td>112</td><td>128</td><td>#</td><td>128</td><td>128</td><td>128</td></tr>
<tr><td>CuN</td><td>0.88</td><td>0.88</td><td>#</td><td>0.88</td><td>0.88</td><td>#</td><td>0.88</td><td>#</td><td>#</td></tr>
<tr><td>DCOI-A (c)</td><td>2.1</td><td>2.1</td><td>#</td><td>~~#~~2.1</td><td>2.1</td><td>#</td><td>2.1</td><td>#</td><td>#</td></tr>
<tr><td>PCP-A & PCP-C (b)</td><td>6.4</td><td>6.4</td><td>6.4</td><td>6.4</td><td>6.4</td><td>#</td><td>6.4</td><td>6.4</td><td>6.4</td></tr>
<tr><td>ACQ-B</td><td>6.4</td><td>6.4</td><td>#</td><td>#</td><td>#</td><td>#</td><td>6.4</td><td>6.4</td><td>6.4</td></tr>
<tr><td>ACQ-C</td><td>6.4</td><td>#</td><td>#</td><td>6.4</td><td>6.4</td><td>6.4</td><td>#</td><td>#</td><td>#</td></tr>
<tr><td>ACQ-D</td><td>6.4</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td></tr>
<tr><td>ACZA</td><td>6.4</td><td>6.4</td><td>6.4</td><td>6.4</td><td>6.4</td><td>#</td><td>6.4</td><td>6.4</td><td>6.4</td></tr>
<tr><td>CA-B</td><td>3.3</td><td>#</td><td>#</td><td>3.3</td><td>3.3</td><td>#</td><td>#</td><td>#</td><td>#</td></tr>
<tr><td>CA-C</td><td>2.4</td><td>#</td><td>#</td><td>2.4</td><td>2.4</td><td>#</td><td>#</td><td>#</td><td>#</td></tr>
<tr><td>CCA</td><td>6.4</td><td>6.4</td><td>6.4</td><td>6.4</td><td>6.4</td><td>6.4</td><td>6.4</td><td>6.4</td><td>6.4</td></tr>
<tr><td>CuN-W</td><td>1.76</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td></tr>
<tr><td>KDS</td><td>#</td><td>7.5</td><td>7.5</td><td>7.5</td><td>7.5</td><td>#</td><td>#</td><td>#</td><td>#</td></tr>
<tr><td>KDS-B</td><td>4.7</td><td>4.7</td><td>4.7</td><td>4.7</td><td>4.7</td><td>4.7</td><td>4.7</td><td>4.7</td><td>#</td></tr>
<tr><td>MCA</td><td>2.4</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td><td>#</td></tr>
<tr><td>MCA-C</td><td>2.4</td><td>#</td><td>#</td><td>#</td><td>#</td><td>2.4</td><td>#</td><td>#</td><td>#</td></tr>
<tr><td colspan="10">Use Category 4B – kg/m^3</td></tr>
</table>
</td><td></td></tr>
</table>

CR (a)	160	160	160	160	160	#	160	160	160
CR-S (a)	160	160	160	160	160	#	160	160	160
CR-PS (a)	160	160	160	160	160	#	160	160	160
CuN	1.1	1.1	#	1.1	1.1	#	1.1	#	#
DCOI-A (c)	2.7	2.7	#	#2.7	2.7	#	2.7	#	#
PCP-A & PCP-C (b)	8.0	8.0	8.0	8.0	8.0	#	8.0	8.0	8.0
ACQ-B	8.0	8.0	#	#	#	#	8.0	8.0	8.0
ACQ-C	8.0	#	#	8.0	8.0	8.0	#	#	#
ACQ-D	8.0	#	#	#	#	#	#	#	#
ACZA	8.0	8.0	8.0	8.0	8.0	#	8.0	8.0	8.0
CA-B	4.0	#	#	4.0	4.0	#	#	#	#
CA-C	4.0	#	#	4.0	4.0	#	#	#	#
CCA	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
MCA	4.0	#	#	#	#	#	#	#	#

Attachment(s): *DCOI-A Lodgepole Pine Post Data.pdf*

1248	AWPA U1 COMM SPEC B 22 SECTION 3.1.2 [Table Data]	**Andy Zahora:** Supporting data for including DCOI-A for lodgepole pine posts is attached as file â€œDCOI-C Lodgepole Pine Post Data.pdfâ€□. This data was previously used to support that DCOI-A could meet all the treatment requirements for lodgepole pine poles. This same data also shows that DCOI-C can satisfy all the requirements for lodgepole pine posts		

Preservative	**Pines**						**Douglas-Fir**	**Western Hemlock**	**Western Larch**
	Southern	**Ponderosa**	**Jack**	**Lodgepole**	**Red**	**Radiata**			
Use Category 4A – pcf									
CR (a)	8.0	8.0	8.0	6.0	8.0	#	8.0	8.0	8.0
CR-S (a)	8.0	8.0	8.0	6.0	8.0	#	#	#	#
CR-PS (a)	8.0	8.0	8.0	7.0	8.0	#	8.0	8.0	8.0
CuN	0.055	0.055	#	0.055	0.055	#	0.055	#	#
DCOI-A (c)	0.13	0.13	#	#0.13	0.13	#	0.13	#	#
PCP-A & PCP-C (b)	0.40	0.40	0.40	0.40	0.40	#	0.40	0.40	0.40
ACQ-B	0.40	0.40	#	#	#	#	0.40	0.40	0.40
ACQ-C	0.40	#	#	0.40	0.40	0.40	#	#	#
ACQ-D	0.40	#	#	#	#	#	#	#	#
ACZA	0.40	0.40	0.40	0.40	0.40	#	0.40	0.40	0.40
CA-B	0.21	#	#	0.21	0.21	#	#	#	#
CA-C	0.15	#	#	0.15	0.15	#	#	#	#
CCA	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
CuN-W	0.11	#	#	#	#	#	#	#	#
KDS	0.47	#	#	#	#	0.47	0.47	0.47	#
KDS-B	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	#
MCA	0.15	#	#	#	#	#	#	#	#
MCA-C	0.15	#	#	#	#	0.15	#	#	#
Use Category 4B -- pcf									
CR (a)	10.0	10.0	10.0	10.0	100.	#	10.0	10.0	10.0
CR-S (a)	10.0	10.0	10.0	10.0	10.0	#	10.0	10.0	10.0
CR-PS (a)	10.0	10.0	10.0	10.0	10.0	#	10.0	10.0	10.0
CuN	0.069	0.069	#	0.069	0.069	#	0.069	#	#
DCOI-A (c)	0.17	0.17	#	#0.17	0.17	#	0.17	#	#
PCP-A & PCP-C (b)	0.50	0.50	0.50	0.50	0.50	#	0.50	0.50	0.50
ACQ-B	0.50	0.50	#	#	#	#	0.50	0.50	0.50
ACQ-C	0.50	#	#	0.50	0.50	0.50	#	#	#
ACQ-D	0.50	#	#	#	#	#	#	#	#

ACZA	0.50	0.50	0.50	0.50	0.50	#	0.50	0.50	0.50
CA-B	0.25	#	#	0.25	0.25	#	#	#	#
CA-C	0.25	#	#	0.25	0.25	#	#	#	#
CCA	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
MCA	0.25	#	#	#	#	#	#	#	#

Attachment(s): *DCOI-A Lodgepole Pine Post Data.pdf*

1090

AWPA U1 COMM SPEC B 22 TABLE 4.2.1 [Table Data]

Andy Zahora: This has been incorrect from back when it was reformatted between 2002 and 2003 in the book of standards. Ponderosa pine retentions were the same for southern and ponderosa pines, which show up correctly as kg/m3, but were put in incorrect in pcf format.

Preservative	Pines						Douglas-Fir		Western Redcedar	Western Larch
	Southern	Ponderosa	Jack	Lodgepole	Red	Radiata	Coastal	Interior		
Modified Exposure (Farm Use) -- kg/m^3										
CR (a)	120	120	192	192	168	#	144	256	256	256
CR-S (a)	120	120	192	192	168	#	144	256	256	256
DCOI-A (c)	2.1	2.1	#	#	2.8	#	2.4	#	2.7	#
PCP-A & PCP-C (b)	6.1	6.1	9.6	9.6	8.5	#	7.2	8.0	8.0	8.0
ACQ-B	9.6	9.6	9.6	9.6	9.6	#	9.6	9.6	9.6	9.6
ACQ-C	9.6	#	#	#	9.6	9.6	#	#	#	#
ACQ-D	9.6	#	#	9.6	9.6	9.6	9.6	#	9.6	#
ACZA	9.6	9.6	9.6	9.6	9.6	#	9.6	9.6	9.6	9.6
CA-B	5.0	#	#	5.0	5.0	#	#	#	5.0	#
CA-C	5.0	#	#	5.0	5.0	#	#	#	5.0	#
CCA	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
MCA	5.0	#	#	#	#	#	#	#	#	#
Modified Exposure (Farm Use) -- pcf										
CR (a)	7.5	7.5	12	12	10.5	#	9.0	16	16	16
CR-S (a)	7.5	7.5	12	12	10.5	#	9.0	16	16	16
DCOI-A (c)	0.13	0.13	#	#	0.18	#	0.15	#	0.17	#
PCP-A & PCP-C (b)	0.38	~~0.60~~0.38	0.60	0.60	0.53	#	0.45	0.50	0.50	0.50
ACQ-B	0.60	0.60	0.60	0.60	0.60	#	0.60	0.60	0.60	0.60
ACQ-C	0.60	#	#	#	0.60	0.60	#	#	#	#
ACQ-D	0.60	#	#	0.60	0.60	0.60	0.60	#	0.60	#
ACZA	0.60	0.60	0.60	0.60	0.60	#	0.60	0.60	0.60	0.60
CA-B	0.31	#	#	0.31	0.31	#	#	#	0.31	#
CA-C	0.31	#	#	0.31	0.31	#	#	#	0.31	#
CCA	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
MCA	0.31	#	#	#	#	#	#	#	#	#

1249

AWPA U1 COMM SPEC B 22 TABLE 4.2.1 [Table Data]

Andy Zahora: Supporting data for including DCOI-A for lodgepole pine posts is attached as file â€œDCOI-C Lodgepole Pine Post Data.pdfâ€□. This data was previously used to support that DCOI-A could meet all the treatment requirements for lodgepole pine

Preservative	Pines						Douglas-Fir		Western Redcedar	Western Larch
	Southern	Ponderosa	Jack	Lodgepole	Red	Radiata	Coastal	Interior		
Modified Exposure (Farm Use) -- kg/m^3										
CR (a)	120	120	192	192	168	#	144	256	256	256
CR-S (a)	120	120	192	192	168	#	144	256	256	256
DCOI-A (c)	2.1	2.1	#	#3.2	2.8	#	2.4	#	2.7	#
PCP-A & PCP-C (b)	6.1	6.1	9.6	9.6	8.5	#	7.2	8.0	8.0	8.0
ACQ-B	9.6	9.6	9.6	9.6	9.6	#	9.6	9.6	9.6	9.6
ACQ-C	9.6	#	#	#	9.6	9.6	#	#	#	#
ACQ-D	9.6	#	#	9.6	9.6	9.6	9.6	#	9.6	#
ACZA	9.6	9.6	9.6	9.6	9.6	#	9.6	9.6	9.6	9.6

poles. This same data also shows that DCOI-C can satisfy all the requirements for lodgepole pine posts.

CA-B	5.0	#	#	5.0	5.0	#	#	#	5.0	#
CA-C	5.0	#	#	5.0	5.0	#	#	#	5.0	#
CCA	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
MCA	5.0	#	#	#	#	#	#	#	#	#
Modified Exposure (Farm Use) -- pcf										
CR (a)	7.5	7.5	12	12	10.5	#	9.0	16	16	16
CR-S (a)	7.5	7.5	12	12	10.5	#	9.0	16	16	16
DCOI-A (c)	0.13	0.13	#	~~#~~0.20	0.18	#	0.15	#	0.17	#
PCP-A & PCP-C (b)	0.38	0.60	0.60	0.60	0.53	#	0.45	0.50	0.50	0.50
ACQ-B	0.60	0.60	0.60	0.60	0.60	#	0.60	0.60	0.60	0.60
ACQ-C	0.60	#	#	#	0.60	0.60	#	#	#	#
ACQ-D	0.60	#	#	0.60	0.60	0.60	0.60	#	0.60	#
ACZA	0.60	0.60	0.60	0.60	0.60	#	0.60	0.60	0.60	0.60
CA-B	0.31	#	#	0.31	0.31	#	#	#	0.31	#
CA-C	0.31	#	#	0.31	0.31	#	#	#	0.31	#
CCA	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
MCA	0.31	#	#	#	#	#	#	#	#	#

Attachment(s): *DCOI-A Lodgepole Pine Post Data.pdf*

1345

AWPA U1 COMM SPEC B 22 TABLE 4.2.1 [Table Data]

AWPA Staff: Consolidated from 1090 & 1249

Preservative	Pines						Douglas-Fir		Western Redcedar	Western Larch
	Southern	Ponderosa	Jack	Lodgepole	Red	Radiata	Coastal	Interior		
Modified Exposure (Farm Use) -- kg/m^3										
CR (a)	120	120	192	192	168	#	144	256	256	256
CR-S (a)	120	120	192	192	168	#	144	256	256	256
DCOI-A (c)	2.1	2.1	#	~~#~~3.2	2.8	#	2.4	#	2.7	#
PCP-A & PCP-C (b)	6.1	6.1	9.6	9.6	8.5	#	7.2	8.0	8.0	8.0
ACQ-B	9.6	9.6	9.6	9.6	9.6	#	9.6	9.6	9.6	9.6
ACQ-C	9.6	#	#	#	9.6	9.6	#	#	#	#
ACQ-D	9.6	#	#	9.6	9.6	9.6	9.6	#	9.6	#
ACZA	9.6	9.6	9.6	9.6	9.6	#	9.6	9.6	9.6	9.6
CA-B	5.0	#	#	5.0	5.0	#	#	#	5.0	#
CA-C	5.0	#	#	5.0	5.0	#	#	#	5.0	#
CCA	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
MCA	5.0	#	#	#	#	#	#	#	#	#
Modified Exposure (Farm Use) -- pcf										
CR (a)	7.5	7.5	12	12	10.5	#	9.0	16	16	16
CR-S (a)	7.5	7.5	12	12	10.5	#	9.0	16	16	16
DCOI-A (c)	0.13	0.13	#	~~#~~0.20	0.18	#	0.15	#	0.17	#
PCP-A & PCP-C (b)	0.38	~~0.60~~0.38	0.60	0.60	0.53	#	0.45	0.50	0.50	0.50
ACQ-B	0.60	0.60	0.60	0.60	0.60	#	0.60	0.60	0.60	0.60
ACQ-C	0.60	#	#	#	0.60	0.60	#	#	#	#
ACQ-D	0.60	#	#	0.60	0.60	0.60	0.60	#	0.60	#
ACZA	0.60	0.60	0.60	0.60	0.60	#	0.60	0.60	0.60	0.60
CA-B	0.31	#	#	0.31	0.31	#	#	#	0.31	#
CA-C	0.31	#	#	0.31	0.31	#	#	#	0.31	#
CCA	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
MCA	0.31	#	#	#	#	#	#	#	#	#

American Wood Protection Association
Protecting Wood Since 1904

AWPA Technical Committee T-7
Fall 2022 Standardization Cycle

Ballot Opening/Closing Dates:	10/17/2022 to 11/16/2022
Items Subject to Recirculation:	22F-T7-M25-MOD
Recirculation Ballot Opening/Closing:	12/5/2022 to 12/15/2022
Total Number Committee Members:	41
Number of Eligible Voters:	40
Number of Eligible Ballots Received:	30
Ballot Return Percentage:	75.0%
Deadline for Appeals:	12/30/2022

AWPA Standard M4-21

22F-T7-M4: Proposal to Revise M4 Adding Section 6.5 MCQ

Proponent(s): Barry Sewell

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 30 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

▼ID	Item	Reason	Proposed Change	Committee Status
1100	AWPA M4 21 SECTION 6.4	**Barry Sewell:** List MCQ in M4 as a preservative for field treatment of treated wood components by adding a new section 6.5. Since MCQ is also being proposed as a new AWPA preservative standard as well the data package is included.	**6.5 Micronized Copper Quat.** Micronized Copper Quat (MCQ) is a water-based preservative system that contains 2.0% copper metal and 1.25% DDAC quat for field treatment applications. Its use is limited to exterior applications where the material is not in contact with the ground. It may be used for field treatment of materials originally treated with waterborne preservatives. It should be applied according to manufacturer's recommendations. Attachment(s): *MCQ DATA PACKAGE.pdf*	

AWPA Standard M19-17

22F-T7-M19: Proposal to Reaffirm M19 Without Revisions

Proponent(s): Gary Kellum

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 30 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

▼ID	Item	Reason	Proposed Change	Committee Status
1089	AWPA M19 17	**Gary Kellum:** No known issues with the existing standard.	**Additional Comment:** Reaffirm without Revisions	

AWPA Standard M25-22

22F-T7-M25-MOD: Proposal to Revise M25 Adding Visual and Machine Vision Determination

Proponent(s): Jacob McBrayer

Committee Meeting Action: Unanimously authorized for letter ballot as MODIFIED.

Letter Ballot Results: Recirculation ballot required with 26 Yes, 1 No, and 2 Abstain after negative resolution process.

Recirculation Ballot Results: Passed as MODIFIED with 27 Yes, 1 No, and 2 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

ID	▲Item	Reason	Proposed Change	Committee Status
1294	AWPA M25 22 SECTION 2.3.3	**Jacob McBrayer:** Proposal to add Machine vision in standard. This section is needed to establish the protocols for using machine vision. This standard will help support treaters with machine vision systems. This proposal will help improve the current preservative penetration standards per the T2 instruction from the AWPA Executive Committee. Machine vision technology will be used to objectively, accurately, and consistently	**2.3.3 Machine Vision.** Machine Vision instruments (see A93) shall have a calibration that is verified at least once a day by using both the calibration chart and a "monitoring" or "reference" sample of known value. These samples will come in the form of validation cards that accompany each machine. The result should not deviate by more than 3% from the original known value. A deviation of more than 3% shall be considered suspect and require investigation to determine the cause for the variance and the need for recalibration or other action. Third-party inspectors shall have their own set of validation cards used to verify units upon inspection visits. Attachment(s): *Supporting Information Doc.pdf*	

		analyze penetration of wood cores. It will take our subjective method of penetration determination and turn it into a quantitative, unbiased assessment. This proposal will serve to implement this technology in commercial wood treating plants and subsequently increase confidence in the quality of the end product. Please refer to the attached supporting information document for further clarification.		
1332	AWPA M25 22 SECTION 2.3.3	**Jacob McBrayer:** Proposal to re-order this section to add in the section for machine vision.	~~2.3.3 Other analysis.~~ **2.3.4 Other analysis**. Other analytical equipment such as titrators, pH meters, calorimeters, etc. shall be maintained in good working order and calibrated in accordance with the applicable AWPA Analytical standards and the instrument manufacturer's recommendations.~~Other analytical equipment such as titrators, pH meters, calorimeters, etc. shall be maintained in good working order and calibrated in accordance with the applicable AWPA Analytical standards and the instrument manufacturer's recommendations.~~	
1296	AWPA M25 22 SECTION 6.4	**Jacob McBrayer:** Proposal to edit standard to allow for machine vision analysis to substitute for existing analysis. This section is necessary to support treaters that use machine vision systems. This proposal will help improve the current preservative penetration standards per the T2 instruction from the AWPA Executive Committee. Machine vision technology will be used to objectively, accurately, and consistently analyze penetration of wood cores. It will take our subjective method of penetration determination and turn it into a quantitative, unbiased assessment. This proposal will serve to implement this technology in commercial wood treating plants and subsequently increase confidence in the quality of the end product. Please refer to the supporting information document attached to the earlier section in this standard for further clarification.	**6.4 Penetration requirements.** The preservative penetration in each core is determined and compared to the minimum required penetration. The number of "passing" and "failing" cores or the total percentage of treated sapwood across all cores is then used to determine if the charge or lot conforms to the penetration requirement. Charges shall always be tested for and determined to be conforming in penetration prior to preparation of the cores for analysis. Attachment(s): *Supporting Information Doc.pdf*	
1298	AWPA M25 22 SECTION 6.4.2.1.2	**Jacob McBrayer:** Proposal for the standard to be changed to allow for machine vision analysis. This section refers to A93 for the operation of machine vision system. This section will be necessary to support treaters that use machine vision system. This proposal will help improve the current preservative penetration standards per the T2 instruction from the AWPA Executive Committee. Machine vision technology will be used to objectively, accurately, and consistently analyze penetration of wood cores. It will take our subjective method of penetration determination and turn it into a quantitative, unbiased assessment. This proposal will serve to implement this technology in commercial wood treating plants and subsequently increase confidence in the quality of the end product. Please refer to the supporting information document attached to an earlier section of this standard for further clarification.	**b. Machine Vision (AWPA A93) Determination.** A machine vision system shall delineate between sapwood, heartwood, and untreated areas on each core based on a calibrated color profile (see AWPA A93 for more detail). The cumulative percent total treated sapwood for the required depth of penetration across all cores shall be determined. A charge must meet or exceed the required percent of total treated sapwood by area to pass; otherwise it fails.	**Modified by proponent in committee meeting before motion:** Add to the proposed text - "for the required depth of penetration"
1301	AWPA M25 22 SECTION 6.4.2.1.2	**Jacob McBrayer:** Proposal for splitting standard into two sections to allow for machine vision protocol. This proposal will help	**6.4.2.1.2 Sapwood species.** **a. Visual Determination.** Areas of cores determined to be heartwood should be noted or removed prior to application of penetration indicator; they are not	

		improve the current preservative penetration standards per the T2 instruction from the AWPA Executive Committee. Machine vision technology will be used to objectively, accurately, and consistently analyze penetration of wood cores. It will take our subjective method of penetration determination and turn it into a quantitative, unbiased assessment. This proposal will serve to implement this technology in commercial wood treating plants and subsequently increase confidence in the quality of the end product. Please refer to the supporting information document attached to an earlier section of this standard for further clarification.	required to be penetrated and shall not be considered. All sapwood areas, regardless of location within the required depth of penetration, must be assessed for clear evidence of preservative penetration. A core must meet or exceed the required percent of treated sapwood by area in the required depth of penetration to pass; otherwise it fails.	
1299	AWPA M25 22 SECTION 6.4.3	**Jacob McBrayer:** Proposal for splitting standard into 2 subsections to describe machine vision determination. This section also provides the exception for the use-case of machine vision systems. This proposal will help improve the current preservative penetration standards per the T2 instruction from the AWPA Executive Committee. Machine vision technology will be used to objectively, accurately, and consistently analyze penetration of wood cores. It will take our subjective method of penetration determination and turn it into a quantitative, unbiased assessment. This proposal will serve to implement this technology in commercial wood treating plants and subsequently increase confidence in the quality of the end product. Please refer to the supporting information document attached in an earlier proposal in this standard for more clarification.	**6.4.3 Penetration conformance.** **a. Visual Determination.** For a charge or lot to be conforming in penetration, the percentage of passing cores (or cross sections for shakes and shingles) from that charge or lot must be greater than or equal to that required in the applicable sections in Standard T1, Commodity Section A: Sawn Products or Commodity Section F: Pressure-Treated Wood Composites. If a lower percentage of the cores pass, the charge is non-conforming for penetration. If multiple sets of cores are taken from a charge, all cores must be used to determine percentage of passing cores. Charges found non-conforming for penetration shall be identified and/or isolated to allow for retreatment or other appropriate corrective measures. ~~For a charge or lot to be conforming in penetration, the percentage of passing cores (or cross sections for shakes and shingles) from that charge or lot must be greater than or equal to that required in the applicable sections in Standard T1, Commodity Section A: Sawn Products or Commodity Section F: Pressure-Treated Wood Composites. If a lower percentage of the cores pass, the charge is non-conforming for penetration. If multiple sets of cores are taken from a charge, all cores must be used to determine percentage of passing cores. Charges found non-conforming for penetration shall be identified and/or isolated to allow for retreatment or other appropriate corrective measures.~~	**Modified by proponent in committee meeting before motion:** Removed the following from the proposed text - "Exception: When using copper as the penetration marker, in lieu of visual determination, machine vision should be used to assess penetration conformance if a machine vision percent conformance requirement is specified in Standard T1, Commodity Section A: Sawn Products."
1300	AWPA M25 22 SECTION 6.4.3	**Jacob McBrayer:** Proposal to add the Standard for machine vision determination of penetration. This section will establish the penetration minimums referenced in T1 for machine vision analysis. This will help support treaters that use machine vision systems. This proposal will help improve the current preservative penetration standards per the T2 instruction from the AWPA Executive Committee. Machine vision technology will be used to objectively, accurately, and consistently analyze penetration of wood cores. It will take our subjective method of penetration determination and turn it into a quantitative, unbiased assessment. This proposal will serve to implement this technology in commercial wood treating plants and subsequently increase confidence in the quality of the end product. Please refer to the supporting information document attached in an earlier proposal in this standard for more clarification.	**b. Machine Vision (AWPA A93) Determination.** For a charge or lot to be conforming in penetration, the percentage of total sapwood treated across all charge cores must be greater than or equal to that required in the applicable sections in standard T1, Commodity Section A: Sawn Products. If a lower percentage of the total sapwood across all charge cores is treated, the charge is non-conforming for penetration. If multiple sets of cores are taken from a charge, all cores must be used to determine percentage of treated sapwood. Charges found non-conforming for penetration shall be identified and/or isolated to allow for retreatment or other appropriate corrective measures.	

AWPA Technical Committee T-8
Fall 2022 Standardization Cycle

Ballot Opening/Closing Dates:	10/17/2022 to 11/16/2022
Items Subject to Recirculation:	N/A
Recirculation Ballot Opening/Closing:	N/A
Total Number Committee Members:	33
Number of Eligible Voters:	32
Number of Eligible Ballots Received:	29
Ballot Return Percentage:	90.6%
Deadline for Appeals:	N/A – No Unresolved Objections

AWPA Standard U1 Commodity Specification F-22

22F-T8-U1(F): Proposal to Revise U1 Comm Spec F With DCOI-C Retentions

Proponent(s): Andy Zahora

Committee Meeting Action: Unanimously authorized for letter ballot as SUBMITTED.

Letter Ballot Results: Passed unanimously as SUBMITTED with 29 Yes, 0 No, and 0 Abstain.

Executive Committee Final Action: Ratified and made effective upon publication of the 2023 Book of Standards.

Note: The information presented below shows only the proposed revisions for this standard in legislative format and/or any other actions to be taken by the committee, such as creation of a new standard or reaffirmation or withdrawal of an existing standard. To view the rationale and supporting data (if any) for each proposed revision, as well as to submit comments or questions, you must visit the AWPA Standards Development Platform - https://awpacommenting.edaptivedocs.org (member login required).

<table>
<tr><th>ID</th><th>▲Item</th><th>Reason</th><th>Proposed Change</th><th>Committee Status</th></tr>
<tr><td>1253</td><td>AWPA U1 COMM SPEC F 22 SECTION 3.2A PRESERVATIVE RETENTIONS (KG/M3) --- STRUCTURAL GLUED LAMINATED TIMBER (TREATED AFTER GLUING) [Table Data]</td><td>Andy Zahora: Supporting data is attached as file â€œComSpec F SYP 3.2 DCOI-C Supporting data.pdfâ€□ which shows that DCOI-C</td><td>
<table>
<tr><th></th><th colspan="11">Preservative Systems</th></tr>
<tr><th>USE CATEGORY Species</th><th>CR(a) (Creosote)</th><th>CR-S(a)</th><th>CR-PS(a)</th><th>DCOI-A</th><th><u>DCOI-C</u></th><th>PCP-A(a) PCP-C(a)</th><th>Cu8(a)</th><th>CuN(a)</th><th>IPBC/PER(c)</th><th>ACZA</th></tr>
<tr><td colspan="11">UC1, UC2, UC3A, UC3B</td></tr>
<tr><td>Southern Pine</td><td>128</td><td>128</td><td>128</td><td>1.6</td><td><u>1.6</u></td><td>4.8</td><td>0.32</td><td>0.64</td><td>0.88</td><td>#</td></tr>
<tr><td>Coastal Douglas-fir</td><td>128</td><td>128</td><td>128</td><td>1.6</td><td></td><td>4.8</td><td>#</td><td>0.64</td><td>0.88</td><td>4.8</td></tr>
</table>
</td><td></td></tr>
</table>

can meet the required southern pine retention requirements in the 0.0-0.6 inch assay zone and can meet the penetration requirements of 2.5â€□ or 85% sapwood penetration in 90% of cores.

Western Hemlock, Hem-Fir	128	128	128	#		4.8	0.32	0.64	0.88	#
Red Oak	112	112	112	#		#	#	#	#	#
Red Maple, Yellow Poplar	128	128	128	#		#	#	#	#	#
UC4A										
Coastal Douglas-fir	160	160	160	3.2		9.6	#	0.96	#	9.6
Southern Pine	160	160	160	3.2	3.2	9.6	#	0.96	#	#
Western Hemlock, Hem-Fir	160	160	160	#		9.6	#	0.96	#	#
Red Oak	136	136	136	#		#	#	#	#	#
Red Maple, Yellow Poplar	160	160	160	#		#	#	#	#	#
UC4B, UC4C$^{(b)}$										
Southern Pine	192	192	#	3.2	3.2	9.6	#	1.2	#	#
Coastal Douglas-fir	192	192	192	3.2		9.6	#	1.2	#	9.6

Attachment(s): *ComSpec F SYP DCOI-C 3.2 Supporting data 7-13-22.pdf*

1254 AWPA U1 COMM SPEC F 22 SECTION 3.2B PRESERVATIVE RETENTIONS (PCF) --- STRUCTURAL GLUED LAMINATED TIMBER (TREATED AFTER GLUING) [Table Data]

Andy Zahora: Supporting data is attached as file â€œComSpec F SYP 3.2 DCOI-C Supporting data.pdfâ€□ which shows that DCOI-C can meet the required southern pine retention requirements in the 0.0-0.6 inch assay zone and can meet the penetration requirements of 2.5â€□ or 85% sapwood penetration in 90% of cores.

	Preservative Systems									
USE CATEGORY Species	**CR$^{(a)}$ (Creosote)**	**CR-S$^{(a)}$**	**CR-PS$^{(a)}$**	**DCOI-A**	**DCOI-C**	**PCP-A$^{(a)}$ PCP-C$^{(a)}$**	**Cu8$^{(a)}$**	**CuN$^{(a)}$**	**IPBC/PER$^{(c)}$**	**ACZA**
UC1, UC2, UC3A, UC3B										
Southern Pine	8.0	8.0	8.0	0.10	0.10	0.30	0.020	0.040	0.055	#
Coastal Douglas-fir	8.0	8.0	8.0	0.10		0.30	#	0.040	0.055	0.30
Western Hemlock, Hem-Fir	8.0	8.0	8.0	#		0.30	0.020	0.040	0.055	#
Red Oak	7.0	7.0	7.0	#		#	#	#	#	#
Red Maple, Yellow Poplar	8.0	8.0	8.0	#		#	#	#	#	#
UC4A										
Coastal Douglas-fir	10.0	10.0	10.0	0.20		0.60	#	0.060	#	0.60
Southern Pine	10.0	10.0	10.0	0.20	0.20	0.60	#	0.060	#	#
Western Hemlock, Hem-Fir	10.0	10.0	10.0	#		0.60	#	0.060	#	#
Red Oak	8.5	8.5	8.5	#		#	#	#	#	#
Red Maple, Yellow Poplar	10.0	10.0	10.0	#		#	#	#	#	#
UC4B, UC4C$^{(b)}$										
Southern Pine	12.0	12.0	#	0.20	0.20	0.60	#	0.075	#	#
Coastal Douglas-fir	12.0	12.0	12.0	0.20		0.60	#	0.075	#	0.60

Attachment(s): *ComSpec F SYP DCOI-C 3.2 Supporting data 7-13-22.pdf*

1250 AWPA U1 COMM SPEC F 22 SECTION 3.3A PRESERVATIVE RETENTIONS

Andy Zahora: Supporting data is attached as

	Preservative System													
	Creosote$^{(a)}$			**Cu8$^{(a)}$**	**CuN$^{(a)}$**			**ACZA**			**KDS**		**PTI**	

<table>
<tr>
<td></td>
<td>(KG/M3) --- STRUCTURAL GLUED LAMINATED OR MECHANICALLY FASTENED TIMBER (LAMINATIONS TREATED PRIOR TO ASSEMBLY) [Table Data]</td>
<td>file â€œComSpec F SYP 3.3 DCOI-C Supporting data.pdfâ€□ which shows that DCOI-C can meet the required southern pine retention requirements in the 0.5-1.0 inch assay zone and can meet the penetration requirements of 3â€□ or 90% sapwood penetration in 100% of cores. Data is also provided as file â€œStructural Wood Systems Southern Pine Qualification Letterâ€□ that show DCOI-C treated southern pine will satisfy end joint, cyclic delamination and face joint qualification requirements for gluing.</td>
<td>
<table>
<tr><th>USE CATEGORY Species</th><th>CR</th><th>CR-S</th><th>CR-PS</th><th>PCP-A(a) PCP-C(a)</th><th>DCOI-C</th><th></th><th></th><th>ACQ-A</th><th>ACQ-C</th><th></th><th>CCA-C</th><th>CA-C</th><th></th><th>KDS-B</th><th></th><th>MCA-C</th></tr>
<tr><td>UC1, UC2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Southern Pine</td><td>128</td><td>128</td><td>#</td><td>4.8</td><td>1.6</td><td>0.32</td><td>0.64</td><td>4.0</td><td>4.0</td><td>4.0</td><td>4.0</td><td>1.0</td><td>3.0</td><td>2.2</td><td>0.21</td><td>0.80</td></tr>
<tr><td>Coastal Douglas-fir, Western Hemlock, Hem-fir</td><td>128</td><td>#</td><td>128</td><td>4.8</td><td></td><td>0.32</td><td>0.64</td><td>4.0</td><td>4.0</td><td>4.0</td><td>4.0</td><td>1.0</td><td>3.0</td><td>2.2</td><td>0.21</td><td>#</td></tr>
<tr><td>UC3A</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Southern Pine</td><td>128</td><td>128</td><td>#</td><td>4.8</td><td>1.6</td><td>0.32</td><td>0.64</td><td>4.0</td><td>4.0</td><td>4.0</td><td>4.0</td><td>1.0</td><td>3.0</td><td>2.2</td><td>0.29</td><td>1.0</td></tr>
<tr><td>Coastal Douglas-fir, Western Hemlock, Hem-fir</td><td>128</td><td>#</td><td>128</td><td>4.8</td><td></td><td>0.32</td><td>0.64</td><td>4.0</td><td>4.0</td><td>4.0</td><td>4.0</td><td>1.0</td><td>3.0</td><td>2.2</td><td>0.29</td><td>#</td></tr>
<tr><td>UC3B</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Southern Pine</td><td>128</td><td>128</td><td>#</td><td>4.8</td><td>1.6</td><td>0.32</td><td>0.64</td><td>6.4</td><td>6.4</td><td>4.0</td><td>4.0</td><td>2.4</td><td>7.5</td><td>#</td><td>#</td><td>2.4</td></tr>
<tr><td>Coastal Douglas-fir, Western Hemlock, Hem-fir</td><td>128</td><td>#</td><td>128</td><td>4.8</td><td></td><td>0.32</td><td>0.64</td><td>6.4</td><td>6.4</td><td>4.0</td><td>4.0</td><td>2.4</td><td>7.5</td><td>#</td><td>#</td><td>#</td></tr>
<tr><td>UC4A</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Southern Pine</td><td>160</td><td>160</td><td>#</td><td>9.6</td><td>3.2</td><td>#</td><td>0.96</td><td>6.4</td><td>6.4</td><td>6.4</td><td>6.4</td><td>2.4</td><td>#</td><td>#</td><td>#</td><td>2.4</td></tr>
<tr><td>Coastal Douglas-fir, Western Hemlock, Hem-fir</td><td>160</td><td>#</td><td>160</td><td>9.6</td><td></td><td>#</td><td>0.96</td><td>6.4</td><td>6.4</td><td>6.4</td><td>6.4</td><td>2.4</td><td>#</td><td>#</td><td>#</td><td>#</td></tr>
</table>
Attachment(s): <i>ComSpec F SYP DCOI-C 3.2 Supporting data 7-13-22.pdf</i>, <i>Structural Wood Systems Southern Pine Qualification Letter.pdf</i>
</td>
<td></td>
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<tr>
<td>1251</td>
<td>AWPA U1 COMM SPEC F 22 SECTION 3.3B PRESERVATIVE RETENTIONS (PCF) --- STRUCTURAL GLUED LAMINATED OR MECHANICALLY FASTENED TIMBER (LAMINATIONS TREATED PRIOR TO ASSEMBLY) [Table Data]</td>
<td>Andy Zahora: Supporting data is attached as file â€œComSpec F SYP 3.3 DCOI-C Supporting data.pdfâ€□ which shows that DCOI-C can meet the required southern pine retention requirements in the 0.5-1.0 inch assay zone and can meet the penetration requirements of 3â€□ or 90% sapwood penetration in</td>
<td>
<table>
<tr><th></th><th colspan="16">Preservative System</th></tr>
<tr><th>USE CATEGORY Species</th><th colspan="3">Creosote(a)</th><th>PCP-A(a) PCP-C(a)</th><th>DCOI-C</th><th>Cu8(a)</th><th>CuN(a)</th><th>ACQ-A</th><th>ACQ-C</th><th>ACZA</th><th>CCA-C</th><th>CA-C</th><th>KDS</th><th>KDS-B</th><th>PTI</th><th>MCA-C</th></tr>
<tr><th></th><th>CR</th><th>CR-S</th><th>CR-PS</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></tr>
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<tr><td>Southern Pine</td><td>8.0</td><td>8.0</td><td>#</td><td>0.30</td><td>0.10</td><td>0.020</td><td>0.040</td><td>0.15</td><td>0.25</td><td>0.25</td><td>0.25</td><td>0.060</td><td>0.19</td><td>0.14</td><td>0.013</td><td>0.050</td></tr>
<tr><td>Coastal Douglas-fir, Western Hemlock, Hem-fir</td><td>8.0</td><td>#</td><td>8.0</td><td>0.30</td><td></td><td>0.020</td><td>0.040</td><td>0.15</td><td>0.25</td><td>0.25</td><td>0.25</td><td>0.060</td><td>0.19</td><td>0.14</td><td>0.013</td><td>#</td></tr>
<tr><td>UC3A</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>UC3B</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
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100% of cores. Data is also provided as file â€œStructural Wood Systems Southern Pine Qualification Letterâ€□ that show DCOI-C treated southern pine will satisfy end joint, cyclic delamination and face joint qualification requirements for gluing.

Coastal Douglas-fir, Western Hemlock, Hem-fir	8.0	#	8.0	0.30		0.020	0.040	0.40	0.40	0.25	0.25	0.15	0.47	#	#	#
UC4A																
Southern Pine	10	10	#	0.60	0.20	#	0.060	0.40	0.40	0.40	0.40	0.15	#	0.29	#	0.15
Coastal Douglas-fir, Western Hemlock, Hem-fir	10	#	10	0.60		#	0.060	0.40	0.40	0.40	0.40	0.15	#	0.29	#	#

Attachment(s): *ComSpec F SYP DCOI-C 3.3 Supporting data revised 7-13-22.pdf*, *ComSpec F SYP DCOI-C 3.3 Supporting data.pdf*, *Structural Wood Systems Southern Pine Qualification Letter.pdf*