

1 STATE OF CALIFORNIA  
2 FRANCHISE TAX BOARD  
3 Legal Division  
4 Jason Riley, Tax Counsel  
5 P.O. Box 1720  
6 Rancho Cordova CA 95741-1720  
7 (916) 845-6534

8 Respondent's Representative

9  
10 BEFORE THE STATE BOARD OF EQUALIZATION  
11 OF THE STATE OF CALIFORNIA

12 In the Matter of the Appeal of: )

Appeal Case ID No. 464316

13 HANK AND CATHERINE FEENSTRA )  
14

15 Refund

16 <u>Year</u>	17 <u>Amount</u>
18 2001	\$14,041.00
19 2002	\$22,838.00
20 2003	\$14,842.00

21  
22  
23  
24 RESPONDENT'S HEARING EXHIBITS  
25  
26  
27  
28

Federal Tax Information  
Confidential Information Omitted  
from  
Minutes Exhibit

This document contained federal tax information, which is confidential and cannot be publically disclosed pursuant to section 6103(a) of the Internal Revenue Code, and is therefore omitted from these minutes.

For more information contact the Board of Equalization's Board Proceedings Division: telephone (916) 322-2270, email [MeetingInfo@boe.ca.gov](mailto:MeetingInfo@boe.ca.gov).

3008-83

12/6/2001

1/5



U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Registration Division (H7505C)  
401 "M" St., S.W.  
Washington, D.C. 20460

EPA Reg Number:

Date of Issuance:

3008-83

DEC - 6 2001

Term of Issuance: Conditional

NOTICE OF PESTICIDE:

Registration

Reregistration

Name of Pesticide Product:

NW 100

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

OSMOSE, INC.  
980 Ellicott Street  
Buffalo, NY 14209-2398

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration/ reregistration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product under FIFRA section 4.

2. Make the following labeling changes listed below before you release the product for shipment:

a. Revise the EPA Registration Number to read, "EPA Reg. No. 3008-83".

b. Add the following statement at the bottom of the First Aid statement:

" In case of an emergency for additional information call toll free (Insert toll free number if available)".

Signature of Approving Official:

Adam Heyward  
Product Manager 34  
Regulatory Management Branch II  
Antimicrobials Division (7510C)

Date:

DEC - 6 2001

The following statements are suggested types of information that may be included in the first aid statement.

- technical information on symptomatology;
- use of supportive treatments to maintain life functions;
- medicine that will counteract the specific physiological effects of the pesticide;
- company telephone number to specific medical personnel who can provide specialized medical advice.

c The Storage and Disposal must be revised to read as follows:

**STORAGE AND DISPOSAL**

Do not contaminate water, food or feed by storage or disposal.

"PESTICIDE STORAGE: ....."

"PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper.....EPA Regional Office for guidance."

"CONTAINER DISPOSAL: Triple rinse.....stay out of smoke".

*Refer to PR Notices 83-3 and 84-1 or 84-5 for detailed information.*

d. Add the following PPE language to the label:

**Personal Protection Equipment (PPE)**

Applicators and other handlers must wear:

- Coveralls worn over long sleeved shirt and long pants.
- Chemical-resistant footwear plus socks
- Goggles or face shield
- Chemical-resistant gloves (such as: barrier laminate, butyl rubber, neoprene rubber, nitrile rubber, polyvinyl chloride (PVC and viton).

**For Cleaning Equipment:**

- Chemical-resistant apron

e. User Safety Requirements and Recommendations must read as follows:

"Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instruction exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry."

"User Safety Recommendations"

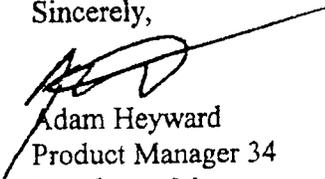
"Users should wash hands before drinking, chewing gum, using tobacco, or using the toilet".  
 "Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing". Users should remove personnel protective equipment immediately after handling this product. Wash outside of gloves before removing. As soon as possible wash thoroughly.

- f. In the "Environmental Hazards section", add the phrase *"This pesticide is toxic to fish."*
  - g. Label must specify where the treated article (wood) will be used, e.g., decks, fence, picnic tables, exterior/interior, etc...
3. The label refer to a Material Safety Data Sheet (MSDS) for additional health and safety information. Submit a copy of the MSDS for the record.
  4. The basic and alternate Confidential Statement of Formulas dated November 30, 2001 are acceptable.
  5. Submit three (3) copies of the revised final printed label bearing the revisions prior to releasing this product for sale.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Sincerely,

  
 Adam Heyward  
 Product Manager 34  
 Regulatory Management Branch II  
 Antimicrobials Division (7510C)

Enclosure

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS  
AND DOMESTIC ANIMALS**

**DANGER. Corrosive.** Causes skin burns and irreversible eye damage. May be fatal if inhaled. Harmful if swallowed. Do not get in eyes, on skin, or clothing. Wear protective goggles or face shield, protective clothing, and rubber gloves. Do not breathe vapors. Wear a mask or pesticide respirator approved by the National Institute for Occupational Safety and Health. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.

Individuals who enter pressure treatment cylinders and spray treatment booths/compartments contaminated with wood treatment solution (e.g., cylinders that are in operation or are not free of the treatment solution) must wear properly fitting, well-maintained, high-efficiency respirators, MSHA/NIOSH-approved for ammonia. If level of ammonia in the plant is unknown or exceeds 35 ppm (STEL) or 25 ppm (ACGIH) of air averaged over an 8-hour work period, air monitoring programs, procedures and record retention and submission must be conducted in accordance with OSHA standards.

**ENVIRONMENTAL HAZARDS**

Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment authority. For guidance, contact your State Water Board or Regional Office of the EPA.

**STORAGE AND DISPOSAL**

Do not contaminate water, food or feed by storage or disposal.

**PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of according to label instructions, contact your state Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**CONTAINER DISPOSAL:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by other procedures approved of by state and local authorities.

**SAFE HANDLING PROCEDURES**

Do not attempt to use without implementing the necessary safety equipment. Applicators must wear gloves impervious to wood treatment solutions in all situations where dermal contact is expected (i.e., handling freshly treated wood, manually opening cylinder doors, etc.)

Individuals who enter treatment cylinders and other related equipment contaminated with wood treatment solutions must wear protective clothing, (including overalls, jacket, gloves, and boots), impervious to wood treatment solutions. In addition, individuals who enter treatment cylinders must wear properly fitting, well-maintained, high efficiency respirators that are MSHA/NIOSH-approved for ammonia. If level of ammonia in the plant is unknown or exceeds 35 ppm (STEL) or 25 ppm (ACGIH) or air averaged over an 8-hour work period, air monitoring programs, procedures, and record retention and submission must be conducted in accordance with OSHA Standards.

Applicators must not eat or drink, or use tobacco products during those parts of the application process that may expose them to the wood treatment concentrate or solutions (i.e., manually opening/closing cylinder doors, moving trays out of the cylinder, mixing chemicals, handling freshly treated wood, etc.).

Wash thoroughly after skin contact and before eating, drinking, using tobacco products, or using restrooms.

Protective clothing must be replaced when it shows signs of significant contamination. Applicator must leave all protective clothing, work shoes or boots, and equipment at the treatment plant. Worn out or severely contaminated protective clothing must be disposed of in a manner approved for pesticide disposal and in accordance with state and federal regulations.

Refer to the NW 100 Material Safety Data Sheet for additional health and safety information.

EXHIBIT: H-2  
PAGE 4 OF 9

**NW 100  
Wood Preservative  
Concentrate**

<b>ACTIVE INGREDIENTS:</b>	
Copper as elemental*	7.4%
n-Alkyl (67% C <sub>12</sub> , 25% C <sub>14</sub> , 7% C <sub>16</sub> , 1% C <sub>18</sub> ) dimethyl benzyl ammonium chloride	4.6%
<b>INERT INGREDIENTS:</b>	<u>88.0%</u>
<b>TOTAL:</b>	100.0%

\*from mixed copper ethanolamine complexes, expressed as copper oxide equivalent 9.2%

**KEEP OUT OF REACH OF CHILDREN  
DANGER**

**FIRST AID**

**IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**IF SWALLOWED:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

**IF INHALED:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

**NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

**SEE SIDE PANEL FOR ADDITIONAL  
PRECAUTIONARY STATEMENTS**

EPA Reg. No. 3008 <sup>IG</sup> EPA Est. No. 3008-TN-1

Manufactured for: **Osmose, Inc.**  
980 Ellicott Street  
Buffalo, NY 14209

Net Contents: \_\_\_\_\_

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

**GENERAL INFORMATION**

NW 100 is a formulation of copper oxide as elemental copper (from copper ethanolamine complexes) and alkyl dimethyl benzyl ammonium chloride for the formulation of amine copper quat wood preservative solutions.

The contents are for use in vacuum-pressure or spray application treatment systems for wood products. Wood products should only be treated with water dilution's ranging from 0.5% to 10% active ingredients(s) by weight. Impregnation procedures must rigidly adhere to applicable specifications of the American Wood Preservers' Association. Treated wood is provided protection against termites and wood decay fungi.

Note: Do not use in contact with brass, bronze or copper.

**SPECIFIC USE INSTRUCTIONS**

**For NW 100 Solutions:**

Refer to mixing instructions in the attached Technical Bulletin.

**CONDITIONS OF SALE AND WARRANTY**

Seller warrants that this product conforms to the standard specifications set forth on this label. SELLER MAKES NO OTHER REPRESENTATIONS OR WARRANTIES OF ANY KIND, AS TO THE MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE, OR ANY OTHER MATTER WITH RESPECT TO THIS PRODUCT WHETHER USED ALONE OR IN COMBINATION WITH ANY OTHER MATERIAL. BUYER ASSUMES ALL RISKS TO PERSONS OR PROPERTY ARISING OUT OF THE USE OR HANDLING AND ACCEPTS THE PRODUCT SUBJECT TO THE CONDITIONS SET FORTH ON THIS LABEL. BECAUSE TIME, GEOGRAPHICAL LOCATION, RATE OF APPLICATION, AND OTHER CONDITIONS ARE BEYOND SELLER'S CONTROL, SELLER'S LIABILITY FOR ANY LOSS OR DAMAGES ARISING OUT OF ANY CAUSE INCLUDING STORAGE, HANDLING AND USE OF THIS PRODUCT SHALL IN NO EVENT EXCEED THE PURCHASE PRICE OF THE PRODUCT, IN RESPECT TO WHICH SUCH CAUSE ARISES OR AT THE SELLER'S OPTION THE REPLACEMENT OF SUCH PRODUCT, AND IN NO EVENT SHALL SELLER BE LIABLE FOR INCIDENTAL, SPECIAL, CONSEQUENTIAL, OR PUNITIVE DAMAGES RESULTING FROM ANY CAUSE. No claim for any cause whatsoever shall be allowed unless Buyer gives Seller prompt written notice thereof. Failure to comply with respect to such claim within one year from the date of delivery of NW 100 for which a claim is alleged, shall constitute a waiver by Buyer of any such claim.

ACCEPTED  
with COMMENTS  
in EPA Letter Dated:

DEC - 6 2008

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act as  
amended, for the pesticide  
registered under EPA Reg. No. 3008-TN-1

4/5

**NW 100 MIXING TABLE**  
To Mix 1000 Gallons of Solution

% Solution	Gallons NW 100 Conc.	Gallons Water	% Solution	Gallons NW 100 Conc.	Gallons Water	% Solution	Gallons NW 100 Conc.	Gallons Water
0.50%	31.1	968.9	3.70%	236.9	763.1	6.90%	455.4	544.6
0.60%	37.3	962.7	3.80%	243.5	756.5	7.00%	462.5	537.5
0.70%	43.6	956.4	3.90%	250.2	749.8	7.10%	469.5	530.5
0.80%	49.9	950.1	4.00%	256.8	743.2	7.20%	476.5	523.4
0.90%	56.2	943.8	4.10%	263.5	736.5	7.30%	483.7	516.3
1.00%	62.5	937.5	4.20%	270.2	729.8	7.40%	490.8	509.2
1.10%	68.8	931.2	4.30%	276.9	723.1	7.50%	497.9	502.1
1.20%	75.1	924.9	4.40%	283.6	716.4	7.60%	505.0	495.0
1.30%	81.4	918.6	4.50%	290.3	709.7	7.70%	512.2	487.8
1.40%	87.8	912.2	4.60%	297.0	703.0	7.80%	519.3	480.7
1.50%	94.1	905.9	4.70%	303.8	696.2	7.90%	526.5	473.5
1.60%	100.5	899.5	4.80%	310.5	689.5	8.00%	533.7	466.3
1.70%	106.9	893.1	4.90%	317.3	682.7	8.10%	540.9	459.1
1.80%	113.2	886.8	5.00%	324.1	675.9	8.20%	548.1	451.9
1.90%	119.6	880.4	5.10%	330.9	669.1	8.30%	555.3	444.7
2.00%	126.1	873.9	5.20%	337.7	662.3	8.40%	562.6	437.4
2.10%	132.5	867.5	5.30%	344.5	655.5	8.50%	569.8	430.2
2.20%	138.9	861.1	5.40%	351.3	648.7	8.60%	577.1	422.9
2.30%	145.4	854.6	5.50%	358.2	641.8	8.70%	584.4	415.6
2.40%	151.8	848.2	5.60%	365.1	634.9	8.80%	591.7	408.3
2.50%	158.3	841.7	5.70%	371.9	628.1	8.90%	599.0	401.0
2.60%	164.8	835.2	5.80%	378.8	621.2	9.00%	606.3	393.7
2.70%	171.3	828.7	5.90%	385.7	614.3	9.10%	613.6	386.4
2.80%	177.8	822.2	6.00%	392.6	607.4	9.20%	621.0	379.0
2.90%	184.3	815.7	6.10%	399.5	600.5	9.30%	628.4	371.6
3.00%	190.8	809.2	6.20%	406.5	593.5	9.40%	635.7	364.3
3.10%	197.4	802.6	6.30%	413.4	586.6	9.50%	643.1	356.9
3.20%	203.9	796.1	6.40%	420.4	579.6	9.60%	650.6	349.4
3.30%	210.5	789.5	6.50%	427.4	572.6	9.70%	658.0	342.0
3.40%	217.1	782.9	6.60%	434.4	565.6	9.80%	665.4	334.6
3.50%	223.7	776.3	6.70%	441.4	558.6	9.90%	672.9	327.1
3.60%	230.3	769.7	6.80%	448.4	551.6	10.00%	680.4	319.6



**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS  
AND DOMESTIC ANIMALS**

**DANGER. Corrosive.** Causes skin burns and irreversible eye damage. May be fatal if inhaled. Harmful if swallowed. Do not get in eyes, on skin, or clothing. Wear protective goggles or face shield, protective clothing, and rubber gloves. Do not breathe vapor. Use respirator or pesticide respirator approved by the National Institute for Occupational Safety and Health. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals. Individuals who enter pressure treatment cylinders and spray treatment booths/compartments contaminated with wood treatment solution (e.g., cylinders that are in operation or are not free of the treatment solution) must wear properly fitting, well-maintained, high-efficiency respirators, MSHA/NIOSH-approved for ammonia. If level of ammonia in the plant is unknown or exceeds 35 ppm (STEL) or 25 ppm (ACGIH) of air averaged over an 8-hour work period, air monitoring programs, procedures and record retention and submission must be conducted in accordance with OSHA standards.

**PERSONAL PROTECTION EQUIPMENT (PPE):**

Applicators and other handlers must wear: coveralls worn over long sleeved shirt and long pants; chemical-resistant footwear plus socks; goggles or face shield; chemical-resistant gloves (such as barrier laminate, butyl rubber, neoprene rubber, nitrile rubber, polyvinyl chloride (PVC) and Viton). For cleaning equipment, a chemical-resistant apron must also be worn. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instruction exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**USER SAFETY RECOMMENDATIONS:**

Users should wash hands before drinking, chewing gum, using tobacco, or using the toilet. Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should remove personnel protective equipment immediately after handling this product. Wash outside of gloves before removing. As soon as possible wash thoroughly.

**ENVIRONMENTAL HAZARDS**

This pesticide is toxic to fish. Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment authority. For guidance, contact your State Water Board or Regional Office of the EPA.

**SAFE HANDLING PROCEDURES**

Do not attempt to use without implementing the necessary safety equipment. Applicators must wear gloves impervious to wood treatment solutions in all situations where dermal contact is expected (i.e., handling freshly treated wood, manually opening cylinder doors, etc.)

Individuals who enter treatment cylinders and other related equipment contaminated with wood treatment solutions must wear protective clothing, (including overalls, jacket, gloves, and boots), impervious to wood treatment solutions. In addition, individuals who enter treatment cylinders must wear properly fitting, well-maintained, high efficiency respirators that are MSHA/NIOSH-approved for ammonia. If level of ammonia in the plant is unknown or exceeds 35 ppm (STEL) or 25 ppm (ACGIH) of air averaged over an 8-hour work period, air monitoring programs, procedures and record retention and submission must be conducted in accordance with OSHA Standards.

Applicators must not eat or drink, or use tobacco products during those parts of the application process that may expose them to the wood treatment concentrate or solutions (i.e., manually opening/closing cylinder doors, moving trams out of the cylinder, mixing chemicals, handling freshly treated wood, etc.)

Wash thoroughly after skin contact and before eating, drinking, using tobacco products, or using restrooms.

Protective clothing must be replaced when it shows signs of significant contamination. Applicator must leave all protective clothing, work shoes or boots, and equipment at the treatment plant. Worn out or severely contaminated protective clothing must be disposed of in a manner approved for pesticide disposal and in accordance with state and federal regulations.

Refer to the NW 100 Material Safety Data Sheet for additional health and safety information.

ACCEPTED  
with COMMENTS  
in EPA Letter Dated:

MAR - 6 2002

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act as  
amended, for the pesticide,  
registered under EPA Reg. No. 3008-83

# NW 100

## Wood Preservative Concentrate

ACTIVE INGREDIENTS:	
Copper as elemental*	7.4%
n-Alkyl (67% C <sub>12</sub> , 25% C <sub>14</sub> , 7% C <sub>16</sub> , 1% C <sub>18</sub> ) dimethyl benzyl ammonium chloride	4.6%
INERT INGREDIENTS:	88.0%
TOTAL:	100.0%

\*from mixed copper ethanolamine complexes, expressed as copper oxide equivalent 9.2%

### KEEP OUT OF REACH OF CHILDREN DANGER

#### FIRST AID

**IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**IF SWALLOWED:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

**IF INHALED:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

**NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. In case of an emergency, for additional information call CHEMTREC toll free at 1-800-424-9300.

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

EPA Reg. No. 3008-83

EPA Est. No. 3008-TN-1

Manufactured by:

Osmose, Inc.  
980 Ellicott Street  
Buffalo, NY 14209

Net Contents: \_\_\_\_\_

### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

### GENERAL INFORMATION

NW 100 is a formulation of copper oxide as elemental copper (from copper ethanolamine complexes) and alkyl dimethyl benzyl ammonium chloride for the formulation of amine copper quat wood preservative solutions. Wood treated with NW 100 may be used in the construction of decks, fences, gazebos, walkways, park benches, retaining walls, fresh water docks, grape stakes and other wood structures.

The contents are for use in vacuum-pressure or spray application treatment systems for wood products. Wood products should only be treated with water dilution's ranging from 0.5% to 10% active ingredient(s) by weight. Impregnation procedures must rigidly adhere to applicable specifications of the American Wood Preservers' Association. Treated wood is provided protection against termites and wood decay fungi.

Note: Do not use in contact with brass, bronze or copper.

### SPECIFIC USE INSTRUCTIONS

#### For NW 100 Solutions:

Refer to mixing instructions in the attached Technical Bulletin.

### STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

**PESTICIDE STORAGE:** Store in a cool, dry, well ventilated area.

**PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of according to label instructions, contact your state Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**CONTAINER DISPOSAL:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by other procedures approved of by state and local authorities.

### CONDITIONS OF SALE AND WARRANTY

Seller warrants that this product conforms to the standard specifications set forth on this label. SELLER MAKES NO OTHER REPRESENTATIONS OR WARRANTIES OF ANY KIND, AS TO THE MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE, OR ANY OTHER MATTER WITH RESPECT TO THIS PRODUCT WHETHER USED ALONE OR IN COMBINATION WITH ANY OTHER MATERIAL. BUYER ASSUMES ALL RISKS TO PERSONS OR PROPERTY ARISING OUT OF THE USE OR HANDLING AND ACCEPTS THE PRODUCT SUBJECT TO THE CONDITIONS SET FORTH ON THIS LABEL. BECAUSE TIME, GEOGRAPHICAL LOCATION, RATE OF APPLICATION, AND OTHER CONDITIONS ARE BEYOND SELLER'S CONTROL, SELLER'S LIABILITY FOR ANY LOSS OR DAMAGES ARISING OUT OF ANY CAUSE INCLUDING STORAGE, HANDLING AND USE OF THIS PRODUCT SHALL IN NO EVENT EXCEED THE PURCHASE PRICE OF THE PRODUCT, IN RESPECT TO WHICH SUCH CAUSE ARISES OR AT THE SELLER'S OPTION THE REPLACEMENT OF SUCH PRODUCT, AND IN NO EVENT SHALL SELLER BE LIABLE FOR INCIDENTAL, SPECIAL, CONSEQUENTIAL, OR PUNITIVE DAMAGES RESULTING FROM ANY CAUSE. No claim for any cause whatsoever shall be allowed unless Buyer gives Seller prompt written notice thereof. Failure to commence action with respect to such claim within one year from the date of delivery of NW 100 for which a claim is alleged, shall constitute a waiver by Buyer of any such claim.

12/01

EXHIBIT  
PAGE 2 OF 9  
H-2

2/3

NW 100 TECHNICAL BULLETIN

NW 100 MIXING TABLE  
To Mix 1000 Gallons of Solution

% Solution	Gallons NW 100 Conc.	Gallons Water	% Solution	Gallons NW 100 Conc.	Gallons Water	% Solution	Gallons NW 100 Conc.	Gallons Water
0.50%	31.1	968.9	3.70%	236.9	763.1	6.90%	455.4	544.6
0.60%	37.3	962.7	3.80%	243.5	756.5	7.00%	462.5	537.5
0.70%	43.6	956.4	3.90%	250.2	749.8	7.10%	469.5	530.5
0.80%	49.9	950.1	4.00%	256.8	743.2	7.20%	476.5	523.4
0.90%	56.2	943.8	4.10%	263.5	736.5	7.30%	483.7	516.3
1.00%	62.5	937.5	4.20%	270.2	729.8	7.40%	490.8	509.2
1.10%	68.8	931.2	4.30%	276.9	723.1	7.50%	497.9	502.1
1.20%	75.1	924.9	4.40%	283.6	716.4	7.60%	505.0	495.0
1.30%	81.4	918.6	4.50%	290.3	709.7	7.70%	512.2	487.8
1.40%	87.8	912.2	4.60%	297.0	703.0	7.80%	519.3	480.7
1.50%	94.1	905.9	4.70%	303.8	696.2	7.90%	526.5	473.5
1.60%	100.5	899.5	4.80%	310.5	689.5	8.00%	533.7	466.3
1.70%	106.9	893.1	4.90%	317.3	682.7	8.10%	540.9	459.1
1.80%	113.2	886.8	5.00%	324.1	675.9	8.20%	548.1	451.9
1.90%	119.6	880.4	5.10%	330.9	669.1	8.30%	555.3	444.7
2.00%	126.1	873.9	5.20%	337.7	662.3	8.40%	562.6	437.4
2.10%	132.5	867.5	5.30%	344.5	655.5	8.50%	569.8	430.2
2.20%	138.9	861.1	5.40%	351.3	648.7	8.60%	577.1	422.9
2.30%	145.4	854.6	5.50%	358.2	641.8	8.70%	584.4	415.6
2.40%	151.8	848.2	5.60%	365.1	634.9	8.80%	591.7	408.3
2.50%	158.3	841.7	5.70%	371.9	628.1	8.90%	599.0	401.0
2.60%	164.8	835.2	5.80%	378.8	621.2	9.00%	606.3	393.7
2.70%	171.3	828.7	5.90%	385.7	614.3	9.10%	613.6	386.4
2.80%	177.8	822.2	6.00%	392.6	607.4	9.20%	621.0	379.0
2.90%	184.3	815.7	6.10%	399.5	600.5	9.30%	628.4	371.6
3.00%	190.8	809.2	6.20%	406.5	593.5	9.40%	635.7	364.3
3.10%	197.4	802.6	6.30%	413.4	586.6	9.50%	643.1	355.9
3.20%	203.9	796.1	6.40%	420.4	579.6	9.60%	650.6	349.4
3.30%	210.5	789.5	6.50%	427.4	572.6	9.70%	658.0	342.0
3.40%	217.1	782.9	6.60%	434.4	565.6	9.80%	665.4	334.6
3.50%	223.7	776.3	6.70%	441.4	558.6	9.90%	672.9	327.1
3.60%	230.3	769.7	6.80%	448.4	551.6	10.00%	680.4	319.6

3008-83

8-26-2002

11

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

AUG 26 2002

Mrs. Teri Muchow  
Regulatory Specialist  
**Osmose, Inc.**  
980 Ellicott Street  
Buffalo, NY 14209-2398

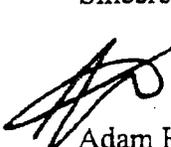
Subject: Response to Osmose Letter  
**NW 100**  
EPA Registration Number 3008-83  
Your Letter Dated June 24, 2002

Dear Mrs. Muchow:

In response to your letter of June 24, 2002, referring to your January 4, 2002 label submission, EPA has re-evaluated your comments concerning the statement "other wood structures", under the heading "General Information" and, agree that the wording and other wood structures" is acceptable.

Should you have any questions concerning this letter, please contact me at (703) 308-6422 or Renae Whitaker at (703) 308-7003.

Sincerely,



Adam Heyward  
Product Manager (34)  
Regulatory Management Branch II  
Antimicrobials Division (7510C)

EXHIBIT: H-2  
PAGE 9 OF 9

CONCURRENCES

SYMBOL	<i>7510C</i>					
SURNAME	<i>[Signature]</i>					
DATE	<i>8/24/02</i>					



# National Evaluation Service, Inc.

5203 Leesburg Pike, Suite 600, Falls Church, Virginia 22041-3401

Phone: 703/931-2187 [www.nateval.org](http://www.nateval.org) Fax: 703/931-6505



## NATIONAL EVALUATION REPORT

### Report No. NER-628

*Issued February 1, 2002*

DIVISION 06 – WOOD AND PLASTICS

Section 06070 – Wood Treatment

**MANUFACTURER:**

OSMOSE, INC  
1016 EVEREE INN ROAD  
GRIFFIN, GEORGIA 30224-0249  
800-241-0240  
[www.osmose.com](http://www.osmose.com)

**EVALUATION SUBJECT:**

NATUREWOOD™ PRESSURE TREATED WOOD

And Wholly Owned Subsidiary:  
TIMBER SPECIALTIES COMPANY  
9184 TWISS ROAD  
CAMBELLVILLE, ONTARIO, CANADA L0P 1B0

**LISTEES:**

Allweather Wood Treaters	White City, OR
C.M. Tucker Lumber Corp.	Pageland, SC
California Cascade Industries	Woodland, CA
Collum's Lumber Mill, Inc.	Allendale, SC
Creative Playthings	Emporia, VA
Deck America	Woodbridge, VA
Great Southern Wood Preserving	Abbeville, AL
Maine Wood Treaters	Mechanic Falls, ME
Midwest Manufacturing	Eau Claire, WI
Quality Wood Treating Co.	Prairie du Chien, WI
Universal Forest Products	Hamilton, OH
Wood Protection LP	Houston, TX

*This report is limited to the specific product and data and test reports submitted by the applicant in its application requesting this report. No independent tests were performed by the National Evaluation Service, Inc. (NES), and NES specifically does not make any warranty, either expressed or implied, as to any finding or other matter in this report or as to any product covered by this report. This disclaimer includes, but is not limited to, merchantability. This report is also subject to the limitation listed herein.*

**NATIONAL  
EVALUATION  
SERVICE, INC.**

**NES**  
Product Evaluation Listing

**1.0 SUBJECT**

**2.0 PROPERTY FOR WHICH  
EVALUATION IS SOUGHT**

**3.0 DESCRIPTION**

**4.0 INSTALLATION**

**5.0 IDENTIFICATION**

**6.0 EVIDENCE SUBMITTED**

**7.0 CONDITIONS OF USE**

**1.0 SUBJECT**

NatureWood™ Pressure Treated Wood

**2.0 PROPERTY FOR WHICH EVALUATION IS SOUGHT**

Preservative-Treated Wood

**3.0 DESCRIPTION**

**3.1 General**

NatureWood™ Pressure Treated Wood is a preservative-treated wood used for wood members that are required by the applicable *Code* to be protected against decay or termites.

NatureWood (NW) brand wood preservatives are produced by Osmose, Inc. and used by independently owned and operated wood preserving plants to pressure treat wood products in accordance with NatureWood Quality Control Standards and Procedures. Some NatureWood products are also available with a factory applied water-repellent additive.

NatureWood products are appropriate for use in above-ground, ground contact, and fresh water contact applications and resist attack by rot, fungal decay, and subterranean termites, including Formosan termites.

**3.2 Preservative System**

NatureWood preservatives are waterborne, Copper-Quat preservative systems used for wood members that are required by the applicable *Code* to be protected against fungal decay or termites, or where such protection is desired.

NatureWood compositions are based on copper combined with a quaternary ammonium compound (quat). These active ingredients are dissolved in an alkaline carrier system of ethanolamine and/or ammonia, which aids in preservative penetration and permanence in wood. The ratio of copper, expressed as CuO, to quat is 2:1, by weight.

**3.3 Materials**

NatureWood Copper Quat Preservatives are used to pressure treat the following materials:

- 3.3.1 Dimensional lumber and timbers of the following sapwood species: Southern Pine, Ponderosa Pine, Red Pine, Radiata Pine, and Caribbean Pine.
- 3.3.2 Dimensional lumber and timbers of the following heartwood species: Douglas-Fir, Western Hemlock, Hem-Fir, Lodgepole Pine, Jack Pine, and Redwood.
- 3.3.3 Maximum nominal size of 2-by-8 in all listed species for decking use only.
- 3.3.4 Southern Pine and Douglas-Fir plywood.
- 3.3.5 Round and sawn posts and building poles of Southern Pine, Ponderosa Pine, Red Pine, Douglas-Fir, Hem-Fir and Western Hemlock.

Minimum preservative retention levels are provided below in Table 1.

**NATIONAL  
EVALUATION  
SERVICE, INC.**

**NES**  
*Product Evaluation Listing*

**1.0 SUBJECT**

**2.0 PROPERTY FOR WHICH  
EVALUATION IS SOUGHT**

**3.0 DESCRIPTION**

**4.0 INSTALLATION**

**5.0 IDENTIFICATION**

**6.0 EVIDENCE SUBMITTED**

**7.0 CONDITIONS OF USE**

[back to the NES home page](#)

Table 1  
Minimum Preservative Retention Requirements  
for NatureWood Products by End Use

End Use	Min. Actives <sup>1,2</sup> Retention pcf (Kg/m <sup>3</sup> )
Above Ground - General Use	0.25 (4.0)
<b>Decking &amp; Specialties Use - Above Ground</b>	
• Sapwood species Listed in Section 3.3.1	0.15 (2.4)
• Heartwood Species Listed in Section 3.3.2	0.25 (4.0)
Ground Contact	0.40 (6.4)
Critical Structural Members	0.60 (9.6)
Wood Foundation Systems	0.60 (9.6)

**Table 1 Notes:**

- <sup>1</sup> Actives retention expressed as CuO + quat.
- <sup>2</sup> Pounds of preservative per cubic foot of wood.

**3.4 Treatment and Processing**

Only the vacuum-pressure treating process described in American Wood-Preservers' Association (AWPA) Commodity Standard C1-00 and in the Processing and Treatment Standard of the Use Category System (UCS) shall be used to produce NatureWood products.

The minimum preservative retention levels are shown above in Section 3.3. Other processing provisions including the minimum preservative penetration requirements are specified in the approved quality control manual. The use of incising may be required to meet the minimum penetration requirements in certain species or sizes of materials.

**3.5 Quality Assurance**

Treatment of materials is conducted in the facilities noted under Listees above according to NatureWood Quality Control Standards and Procedures with inspections by an NES listed independent, third party inspection agency.

**3.6 Corrosion**

Metals used in contact with NatureWood pressure treated wood shall be hot dip galvanized, stainless steel or triple coated zinc polymer materials. Carbon steel, aluminum, red brass and bronze shall not be used in contact with NatureWood products.

**3.7 AWPA Standards**

NatureWood Copper-Quat Preservatives and NatureWood Pressure-Treated Wood standards and specifications rely primarily on those recognized by the American Wood-Preservers' Association (AWPA). Additional specifications set forth by Osmose are proprietary and differ from AWPA standards.

All applicable AWPA Standards are listed in Section 6 of this report.

**4.0 INSTALLATION**

**4.1 General**

EXHIBIT: DDD  
PAGE 3 OF 7

NatureWood™ Pressure Treated Wood is installed as preservative-treated lumber, timbers and plywood in accordance with the requirements of the applicable Code.

**NATIONAL  
EVALUATION  
SERVICE, INC.**

*NES  
Product Evaluation Listing*

**1.0 SUBJECT**

**2.0 PROPERTY FOR WHICH  
EVALUATION IS SOUGHT**

**3.0 DESCRIPTION**

**4.0 INSTALLATION**

**5.0 IDENTIFICATION**

**6.0 EVIDENCE SUBMITTED**

**7.0 CONDITIONS OF USE**

[back to the NES home page](#)

The manufacturer's and industry published installation instructions for wood and pressure-treated wood and this report shall be strictly adhered to and a copy of these instructions shall be available at all times on the job site during installation.

The instructions within this report govern if there are any conflicts between the manufacturer's instructions and this report.

**4.2 Applications**

NatureWood pressure treated products are permitted in locations where wood is used and/or in locations required by the applicable *Code* to be fungal decay and/or termite resistant. The treated wood members are listed for use in above-ground and ground contact applications. Typical applications are listed below in Table 2.

Locations requiring preservative-treated wood for fungal decay and/or termite resistance are listed in:

- Section 2304.11      *International Building Code*
- Section 2304        *Standard Building Code*
- Section 2311        *BOCA National Building Code*
- Section 2306        *Uniform Building Code™*
- Sections R323, R324    *International Residential Code™ for One- and Two-Family Dwellings*
- Sections 322, 323    *International One and Two Family Dwelling Code.*

Table 2  
Typical Applications for  
NatureWood Pressure Treated Wood Products

Service Conditions	Typical Applications
Above Ground	Decking, Rails, Spindles, Trim and Fascia, Framing, Flooring, Sill Plates, Trellises, Gazebos, Fencing
Ground Contact	Deck Support Posts, Fence Posts
Critical Structural	Permanent Wood Foundations, Building Poles

**4.3 Fasteners**

The fasteners used with the product shall be hot dip galvanized, stainless steel or triple coated zinc polymer materials.

**4.4 Structural**

The maximum load duration factor allowed for structural members pressure-treated with NatureWood Preservatives shall be 1.6 in accordance with section 2.3 of the AFPA, **National Design Specification for Wood Construction**.

**5.0 IDENTIFICATION**

Each piece of NatureWood™ Pressure Treated Wood lumber, timber and plywood shall be labeled with the manufacturer's name/and or trademark, address, the product name, grade mark, third-party inspection label Timber Products Inspection, Inc. NER-QA275, and this National Evaluation Service evaluation report number, NER-628. Sample Labels see Figure 1 of this report.

**6.0 EVIDENCE SUBMITTED**

- 6.1 American Wood-Preservers' Association (AWPA) Standards
  - 6.1.1 AWPA Analytical Standards A2-98 (sections 1 and 6), A3-00, A9-00, A11-93, A16-93, A17-97, A18-99.

EXHIBIT: DDD  
PAGE 4 OF 2

**NATIONAL  
EVALUATION  
SERVICE, INC**

**NES**

*(Product Evaluation) Listing*

**1.0 SUBJECT**

**2.0 PROPERTY FOR WHICH  
EVALUATION IS SOUGHT**

**3.0 DESCRIPTION**

**4.0 INSTALLATION**

**5.0 IDENTIFICATION**

**6.0 EVIDENCE SUBMITTED**

**7.0 CONDITIONS OF USE**

6.1.2 AWPA Commodity Standards C1-00, C2-00, C4-99, C5-00, C9-00, C14-99, C15-00, C16-00, C17-00, C22-96.

6.1.3 AWPA Preservative Standard P5-01.

6.2 AWPA Reports of Treatments Subcommittees

6.2.1 Report of Subcommittee T-2, Lumber and Timbers, September 23, 1992

6.2.2 Report of Subcommittee T-8, Composites, September 23, 1992

6.2.3 Report of Subcommittee T-2, Lumber and Timbers, September 14, 1994

6.2.4 Report of Subcommittee T-2, Lumber and Timbers, September 27, 1995

6.2.5 Report of Subcommittee T-8, Composites, September 27, 1995

6.3 Technical Information on the Use of ACQ (Alkaline Copper Quaternary) as a Wood Preservative, Chemical Specialties, Inc., dated April 2001.

6.3.1 Laboratory Tests

- Soil Block Tests, AWPA E10-91.
- Termite Tests, CSIRO Australian Laboratory Choice Test Method, CSIRO, Melbourne, Australia.

6.3.2 Simulated Field Tests

- Soil Bed Exposure Test, AWPA E14-94.

6.3.3 Field Tests

- Ground Contact Field Stake Tests, AWPA E7-93 at Hilo, HI, Harrisburg, NC, and Gainesville, FL.
- Ground Contact Field Stake Tests, AWPA E7-93 at Dorman, MS and Saucier, MS, Mississippi Forest Products Laboratory, MSU, Starkville, MS.
- Ground Contact Field Stake Tests, AWPA E7-93 at Innisfail, Queensland, Australia and Canal Creek, North Queensland, Australia, DPI Queensland Forest Service.
- Ground Contact Field Stake Tests, AWPA E7-93 at Whakarewarewa, New Zealand, New Zealand Forest Research Institute.

6.3.4 Preservative Permanence

- Laboratory Leaching Test, AWPA E10-87 and E11-87, Michigan Technological University.
- Depletion from Soil Bed Test Samples, AWPA E15-93.
- Depletion from Ground Contact Stakes, E7-93 at Hilo, HI and Gainesville, FL.

6.3.5 Effects on Wood Properties

- Static Bending Strength Test, ASTM D-143, Clemson University and Michigan Technological University.
- Glueline Shear Properties of 4-ply 15/32 Southern Pine Plywood, Michigan Technological University.

6.3.6 Corrosivity

- Corrosion of Metals by Treated Wood, AWPA E12-94

6.3.7 Treatment Testing

- Treatment Trials of Various Wood Species, Vacuum-Pressure Method described in AWPA C1.

6.4 Osmose NatureWood™ Pressure Treated Wood Quality Control Manual, which includes Osmose Standards NW-01 (General Use QC Procedures) and

[back to the NES home page](#)

AWPA E12-94 **DDD**  
PAGE **5** OF **7**

NW-DECK-01 (Decking QC Procedures), dated October 2001. Signed by Osmose, Inc., Licensed Producers and Timber Products Inspection, Inc. (TPI).

**NATIONAL EVALUATION SERVICE, INC.**  
**NES**  
*Product Evaluation Listing*

**1.0 SUBJECT**

**2.0 PROPERTY FOR WHICH EVALUATION IS SOUGHT**

**3.0 DESCRIPTION**

**4.0 INSTALLATION**

**5.0 IDENTIFICATION**

**6.0 EVIDENCE SUBMITTED**

**7.0 CONDITIONS OF USE**

[back to the NES home page](#)

**7.0 CONDITIONS OF USE**

The National Evaluation Service Committee finds that the NatureWood™ Pressure Treated Wood as described in this report complies with or is a suitable alternate to that specified in the *2000 International Building Code* with the *2001 Supplement*, the *2000 International Residential Code* for One- and Two-Family Dwellings with the *2001 Supplement*, the *BOCA National Building Code/1999*, the *1999 Standard Building Code*, the *1997 Uniform Building Code*™, and the *1998 International One and Two Family Dwelling Code* subject to the following conditions:

- 7.1 This Evaluation Report and the manufacturer's published installation instructions, when required by the code official, shall be submitted at the time of permit application.
- 7.2 The NatureWood products are limited to the wood species and minimum retentions noted under Section 3.3 and Table 1 above.
- 7.3 The treatment process complies with this report and Osmose Quality Control Standards and Procedures for NatureWood products.
- 7.4 The treatment process is carried out at the manufacturing facilities of the listees noted in this report, under a quality control program with inspections by an NES listed independent, third party quality assurance agency.
- 7.5 Dimensional lumber designated for "Decking Use" shall be a maximum of 2 inches thick and 8 inches wide.
- 7.6 The product is limited to the applications noted under Section 4.2 above.
- 7.7 NatureWood Pressure Treated Wood preservatives shall not be used to treat LVL, OSB, or FRTW wood products.
- 7.8 Surface treatment of field cuts shall be in accordance with the manufacturer's recommendations.
- 7.9 In areas where a soil treatment/barrier termiticide treatment is required by the applicable *Code* or local code official, NatureWood Pressure Treated Wood is used only as supplemental protection from termites and is not a replacement for required treatments or barriers.
- 7.10 NatureWood Pressure Treated Wood has not been evaluated for exposure to salt water.
- 7.11 This report is subject to periodic re-examination. For information on the current status of this report, consult the NES Product Evaluation Listing or contact the NES.

EXHIBIT: DDD  
PAGE 6 OF 7

Figure 1. Sample Product Labels

NatureWood™  
PRESSURE TREATED WOOD  
2002-2003  
WOOD TREATING COMPANY  
CITY, STATE

0.25 PCF  
COPPER QUAT

**ABOVE GROUND**

TP MONITORED STD NW-01  
(NER-QA275)

NER-XXXX

NatureWood™  
PRESSURE TREATED WOOD  
2002-2003  
WOOD TREATING COMPANY  
CITY, STATE

0.40 PCF  
COPPER QUAT

**GROUND CONTACT**

TP MONITORED STD NW-01  
(NER-QA275)

NER-XXXX

NatureWood™  
PRESSURE TREATED WOOD  
2002-2003  
WOOD TREATING COMPANY  
CITY, STATE

0.60 PCF  
COPPER QUAT

**GROUND CONTACT**

TP MONITORED STD NW-01  
(NER-QA275)

NER-XXXX

NatureWood™  
PRESSURE TREATED WOOD  
2002-2003  
WOOD TREATING COMPANY  
CITY, STATE

0.60 PCF  
COPPER QUAT

**FOUNDATION USE**

KDAT

TP MONITORED STD NW-01  
(NER-QA275)

NER-XXXX

NatureWood™  
PRESSURE TREATED WOOD  
2002-2003  
WOOD TREATING COMPANY  
CITY, STATE

0.15 PCF  
COPPER QUAT

**DECKING USE**

TP MONITORED STD NW-DECK-01  
(NER-QA275)

NER-XXXX

NatureWood™  
PRESSURE TREATED WOOD  
2002-2003  
WOOD TREATING COMPANY  
CITY, STATE

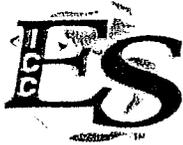
0.25 PCF  
COPPER QUAT

**DECKING USE**

TP MONITORED STD NW-DECK-01  
(NER-QA275)

NER-XXXX

EXHIBIT: DDD  
PAGE 7 OF 7



# LEGACY REPORT

NER-648

Issued September 1, 2002  
Revision A, September 1, 2003

**ICC Evaluation Service, Inc.**  
[www.icc-es.org](http://www.icc-es.org)

Business/Regional Office ■ 5360 Workman Mill Road, Whittier, California 90601 ■ (562) 699-0543  
Regional Office ■ 900 Montclair Road, Suite A, Birmingham, Alabama 35213 ■ (205) 599-9800  
Regional Office ■ 4051 West Flossmoor Road, Country Club Hills, Illinois 60478 ■ (708) 799-2305

Legacy Report on the 2000 *International Building Code*® with the 2002 *Accumulative Supplement to the International Codes*™, the 2000 *International Residential Code for One- and Two-Family Dwellings*® with the 2002 *Accumulative Supplement to the International Codes*™, the *BOCA*® *National Building Code/1999*, the 1999 *Standard Building Code*®, the 1997 *Uniform Building Code*™, and the 1998 *International One and Two Family Dwelling Code*®

**Division 06 - WOOD AND PLASTICS**  
**Section 06070 - Wood Treatment**

OSMOSE, INC  
1016 EVEREE INN ROAD  
GRIFFIN, GEORGIA 30224-0249  
800-241-0240  
[www.osmose.com](http://www.osmose.com)

And Wholly Owned Subsidiary:  
TIMBER SPECIALTIES CO.  
9184 TWISS ROAD  
CAMBELLVILLE, ONTARIO, CANADA L0P 1B0

**LISTEES: Advance Guard brand**

Arizona Pacific Wood Preserving, Inc., Eloy, AZ  
California Cascade Ind., Fontana, CA  
Pacific Wood Preserving, Bakersfield, CA  
Nevada Wood Preserving, Silver Springs, NV  
Pacific Wood Preserving, Sheridan, OR  
L.L. Brewton Lumber Co., Inc., Winnfield, LA  
Wood Protection Co., Houston, TX  
Great Southern Wood Preserving, Irvington, AL  
Western Cleanwood Preservers, Ltd., Surrey, British Columbia  
Royal Pacific Industries, Inc., McMinnville, OR  
Maine Wood Treaters, Inc., Mechanic Falls, ME  
Thunderbolt Wood Treaters Co., Inc., Riverbank, CA

**LISTEES: Hi-Bor brand**

Hawaii Planing Mill, Ltd., Hilo, HI  
Hilo Wood Treating, Hilo, HI  
Honolulu Wood Treating Co., Ltd., Kapolei, HI  
Royal Pacific Industries, Inc., McMinnville, OR

**1.0 SUBJECT**

Advance Guard® brand Borate Pressure Treated Wood  
(Hi-bor brand Pressure Treated Wood)

**2.0 PROPERTY FOR WHICH EVALUATION IS SOUGHT**

Preservative-Treated Wood

**3.0 DESCRIPTION**

**3.1 General**

Advance Guard® brand Borate Pressure Treated Wood is a preservative-treated wood used for wood members that are required by the Code to be protected against decay or termites. The preservative is disodium octaborate tetrahydrate (DOT), a soluble sodium borate preservative that is pressure impregnated into lumber or plywood. The DOT preservative is listed in AWPA Standard P5, Standard for Waterborne Preservatives. The borate preservative is water soluble therefore the treated wood is limited to above ground use and shall be protected from exposure to liquid water.

**3.2 AWPA Standards**

Advance Guard® brand Borate Pressure Treated Wood (DOT) was evaluated for use under the following AWPA Standards:

- AWPA C-1 All Timber Products-Preservative Treatment by Pressure Process
- AWPAC-9 Plywood-Preservative Treatment by Pressure Process
- AWPA C-31 Lumber Used Out of Contact With the Ground and Continuously Protected From Liquid Water-Treatment by Pressure Process
- AWPA P-5 Standard for Waterborne Preservative

**3.3 Minimum Retention and Wood Species**

**3.3.1 Lumber Above Ground Use:** Southern Pine, Ponderosa Pine, Coastal Douglas Fir, Spruce-Pine-Fir, Red Pine and Hem-Fir.

**3.3.2 Plywood Above Ground Use:** Group 1 and 2 Plywood with Southern Pine, Hem-Fir or Douglas Fir face veneers.

**3.3.3 Treatment:** Minimum retention and penetration levels are specified in the approved quality control manual.

ICC-ES legacy reports are not to be construed as representing aesthetics or any other attributes not specifically addressed, nor are they to be construed as an endorsement of the subject of the report or a recommendation for its use. There is no warranty by ICC Evaluation Service, Inc., express or implied, as to any finding or other matter in this report, or as to any product covered by the report.



### 3.4 Corrosion

The corrosivity of Advance Guard® brand Borate Pressure Treated Wood has been evaluated in accordance with AWPA Standard E 12 for a variety of metals. The corrosion rates for carbon steel, galvanized steel, stainless steel, aluminum, red brass, and copper are not increased by Advanced Guard® chemicals when the treated wood products are used as recommended by the manufacturer and properly sized for the materials selected.

### 3.5 Quality Assurance

Treatment of materials is conducted in the facilities noted under Listees above with quality control inspections by Timber Products Inspection, Inc. NER-QA275.

### 4.0 INSTALLATION

#### 4.1 General

Advance Guard® brand Borate Pressure Treated Wood is installed as preservative-treated lumber and plywood in accordance with the requirements of the applicable Code.

The manufacturer's published installation instructions and this report shall be strictly adhered to and a copy of these instructions shall be available at all times on the job site during installation.

The instructions within this report govern if there are any conflicts between the manufacturer's published installation instructions and this report.

#### 4.2 Applications

Advance Guard® brand Borate Pressure Treated Wood is permitted in locations that are required by the applicable Code to be decay or termite resistant. The treated wood members are listed for use in above ground applications where it is continuously protected from liquid water.

Locations requiring preservative-treated wood for decay or termite resistance are listed in:

Section 2304.11	<i>International Building Code</i>
Section 2304	<i>Standard Building Code</i>
Section 2311	<i>BOCA National Building Code</i>
Section 2306	<i>Uniform Building Code™</i>
Sections R323, & R324	<i>International Residential Code</i>
Sections 322, 323	<i>International One and Two Family Dwelling Code.</i>

#### 4.3 Fasteners

The fasteners used with the product shall be carbon steel, galvanized steel, stainless steel, copper, and silicon bronze.

#### 4.4 Protection from Water

The borate preservative in Advance Guard® brand Borate Pressure Treated Wood is water soluble and the treated wood shall be protected from rain and snow.

Advance Guard® brand Borate Pressure Treated wood used in weather protected exterior applications shall be continuously protected from direct wetting with a minimum of one coat primer and two coats finish paint.

#### 4.5 Structural

The maximum load duration factor allowed for structural members pressure-treated with sodium borate (DOT) shall be

1.6 in accordance with section 2.3 of the AFPA, National Design Specification for Wood Construction.

### 5.0 IDENTIFICATION

Each piece of Advance Guard® brand Borate Pressure Treated Wood lumber and plywood shall be labeled with the manufacturer's name/and or trademark, address, the product name, grade mark, third-party inspection label Timber Products Inspection, Inc. (NER-QA275 or IAS AA-664), and this ICC-ES Legacy report number, NER-648. Sample Labels see Figure 1 of this report.

### 6.0 EVIDENCE SUBMITTED

#### 6.1 American Wood-Preserves' Association (AWPA) Standards:

- AWPA Commodity Standards C1-00, C9-00, C31-99
- AWPA Preservative Standard P5-01

#### 6.2 AWPA Reports of Treatments Subcommittees:

- Report of Subcommittee T-2, Lumber and Timber, 1991.
- Report of Subcommittee T-2, Lumber and Timber, 1994.

#### 6.3 Technical information on Advance Guard brand Borate Pressure Treated Wood:

##### 6.3.1 Laboratory tests, Soil Block AWPA E 10, termite resistance, fungus and decay resistance:

- Soil Block Testing, AWPA M10 (replaced by E 10), test fungus *Poria placent* Timber Products Inspection, July 30, 1990, signed by Eugene Chiu.
- Soil Block Testing, AWPA M10 (replaced by E 10), test fungus *Gloeophyllum trabeum*, Timber Products Inspection, November 16, 1989, signed by Eugene Chiu.
- Soil Block Testing, AWPA M10 (replaced by E 10), test fungus *Lentinus lepideus*, Timber Products Inspection, November 16, 1989, signed by Eugene Chiu.
- Test report, Laboratory evaluation of DOT (Tim-Bor) as a wood preservative against Formosan and Eastern Subterranean Termites (Isoptera: Rhinotermitidae), two studies conducted a no-choice feeding bioassay and a choice feeding bioassay, Ft. Lauderdale Research and Education Center, University of Florida, Institute of Food and Agricultural Sciences, 7/9/89, signed by Nan-Yao Su and Rudolf H. Scheffrahn.
- Test report, Laboratory tests Resistance of Douglas Fir Heartwood pressure treated with D.O.T. (disodium octaborate) to the Formosan termites, ASTM D 3345 modified, Department of Entomology University of Hawaii, October 3, 1989, Minoru Tamashiro and Robin T. Yamamoto.
- Test report, Laboratory tests Effect of D.O.T. (disodium octaborate) on the Formosan termites, test procedures used treated filter paper fed to termites and soil treatment method using a mixture of clay, sand and mansand (basaltic rock ground to sand size) treated with D.O.T., Department of Entomology University of Hawaii, November 4, 1988, Minoru Tamashiro and Robin T. Yamamoto.
- Test report, efficacy of DOT to Brown-rot and White-Rot fungi by laboratory bioassays, ASTM D 1413, Mississippi Forest Products Laboratory, Mississippi State University, November 17, 1989, signed by Terry L. Amburgey and S.V. Parikh.

EXHIBIT: 600

- 6.3.2 Field Tests Termites: Reports prepared by J. Kenneth Grace, Professor & Entomologist, University of Hawaii at Manoa, cover letter September 7, 2001:

- Termite Resistance of Borate-treated lumber in a three-year Above-Ground Field Test in Hawaii, IRG/WP 00-30236, May 2000.
- Sequential Exposure of Borate Treated douglas-fir to Multiple Formosan Subterranean Termite colonies in a 40 week Field Test, IRG/WP 93-10006, May 1993, field tests Hawaii.
- Repeated exposure of borate-treated douglas-fir lumber to Formosan subterranean termites in an accelerated field test, Forest Products Journal, Vol 44, No.1, January 1994. 10 week aboveground field tests Hawaii.
- Resistance of borate-treated douglas-fir to the Formosan subterranean termite, Forest Products Journal, Vol 42, No.2, February 1992. Toxicity testing, laboratory tests of treated wood, field tests of treated wood, Hawaii.

### 6.3.3 Preservative Permanence

- Borate Loss due to Condensation or Flooding from Borate-Treated Sill plates, Forintek Canada Corp., Contract No. 2000-2615, April 2000, signed by tony Byrne, Adam McRobbie and Jean Cook.
- Five-year Inspection and analysis of Borate-Treated L-Joints, Forintek Canada corp., Contract No. 99-2561, August 1999.

### 6.3.4 Effects on Wood Properties

- Effect of Pressure Treatment on the Mechanical Properties of Southern Pine Lumber, Timber Products Inspection, TP Project No. 99-089, February 7, 2000, signed by Walter W. Boyles. Tested for bending MOR and MOE under ASTM D 198, Tension parallel to grain under ASTM D 198, Compression parallel to grain under ASTM D 143, Compression perpendicular to grain under ASTM D 143, moisture content and specific gravity.

### 6.3.5 Corrosivity

- Corrosivity of Borate Treated Wood, AWP A E 12, January 17, 2000, School of Forestry and Wood Products Michigan Technological University.

### 6.3.6 Treatment Testing for C1, C9, C31

- Douglas Fir Lumber and Plywood pressure treated with DOT, Certification by Timber Products Inspection, Boring Sample Reports, 12/18/90. AWP A C1.
- Ponderosa Pine, Lumber pressure treated with DOT, Certification by Timber Products Inspection, Boring Sample Reports, 1997. AWP A C31.
- Western Spruce-Pine-Fir lumber treated with DOT, Treatment trials by U.S. Borax with independent study by Forintek Canada Corp. 1997, AWP A C 31.
- Coastal Douglas-Fir lumber treated with DOT, Treatment trials 1995 through 1997 at Pacific Wood Preserving in Bakersfield CA; 1996 Royal Pacific McMinnville, OR, and 1995 through 1997 at MidPac Lumber Co., Oahu, HI with Boring Sample Reports and Penetration Results Reports by Timber Products Inspection, AWP A C 31.

- 6.4 Osmose Advance Guard Borate Pressure Treated Wood Quality Control Manual, Standards AG1-01 and AG2-01, Plant Operations Manual, November 2001. Signed by Osmose, Inc., Licensed Producers and Timber Products Inspection, Inc. (TPI).

- Advance Guard® Standard AG1-01, Lumber, Printed November, 2001.
- Advance Guard® Standard AG2-01, Plywood, Printed November, 2001.

## 7.0 CONDITIONS OF USE

The ICC-ES Legacy Evaluation Subcommittee on the National Evaluation Reports finds that the Advance Guard® brand Borate Pressure Treated Wood lumber and plywood as described in this report complies with or is a suitable alternate to that specified in the 2000 *International Building Code*® with the 2002 *Accumulative Supplement to the International Codes*™, the 2000 *International Residential Code for One- and Two-Family Dwellings*® with the 2002 *Accumulative Supplement to the International Codes*™, the BOCA® *National Building Code/1999*, the 1999 *Standard Building Code*®, the 1997 *Uniform Building Code*™, and the 1998 *International One and Two Family Dwelling Code*® subject to the following conditions:

- 7.1 This Evaluation Report and the manufacturer's published installation instructions, when required by the code official, shall be submitted at the time of permit application.
- 7.2 Installation complies with this report and the applicable Code.
- 7.3 The treatment process complies with this report and Osmose Quality Control Standards and Procedures for Advanced Guard® brand Borate Pressure Treated Wood products.
- 7.4 The treatment process is carried out at the manufacturing facilities of the listees noted in this report, under a quality control program with inspections by an NES listed independent, third party quality assurance agency.
- 7.5 Advance Guard® brand Borate Pressure Treated Wood shall not be exposed to the weather or direct wetting and shall be continuously protected from liquid water.
- 7.6 Advanced Guard® brand Borate Pressure Treated Wood shall not be used in contact with the ground.
- 7.7 Exposure to precipitation during shipping, storage or installation shall be avoided. If material does become wet, it shall be replaced or permitted to dry (maximum 19% MC for lumber and 18% MC for plywood) prior to covering or enclosure by wallboard or other construction materials.
- 7.8 The product is limited to the wood species, minimum retention values, type of wood member (lumber, plywood) and above ground use noted under Section 3.3 above.
- 7.9 Advance Guard® brand Borate Pressure Treated Wood shall not be used to treat LVL, OSB, or FRTW wood products.
- 7.10 Surface treatment of field cuts shall be in accordance with the manufacturer's recommendations.
- 7.11 Retention levels in treated lumber and plywood is required to be greater for protection against Formosan termites and these wood products shall be labeled/identified for this use.
- 7.12 In areas where a soil treatment/barrier termiticide treatment is required by the applicable Code or local authority, Advanced Guard® brand Borate Pressure Treated Wood is used only as supplemental protection from termites and is not a replacement for required treatments or barriers.
- 7.13 This report is subject to periodic re-examination. For information on the current status of this report, consult the ICC-ES website.

FIGURE 1  
TYPICAL ADVANCE GUARD BRAND BORATE PRESSURE TREATED STAMP DESIGN (0.42 DOT)

 <p>ABC Wood Preservers Hometown, USA NER-XXX TP MONITORED STD AGI-00 (NER QA-XXX)</p>	<p>ABOVE GROUND USE, CONTINUOUSLY PROTECTED FROM LIQUID WATER</p> <p>0.28B<sub>2</sub>O<sub>3</sub> (0.42 DOT)</p> <p>SBX</p> <p>THIS RETENTION IS SUITABLE FOR EXPOSURE TO FORMOSAN TERMITES</p>
<p>J F M A M J J A S O N D 2001</p>	

FIGURE 2  
TYPICAL ADVANCE GUARD BRAND BORATE PRESSURE TREATED STAMP DESIGN (0.25 DOT)

 <p>ABC Wood Preservers Hometown, USA NER-XXX TP MONITORED STD AB2-00 (NER QA-XXX)</p>	<p>ABOVE GROUND USE, CONTINUOUSLY PROTECTED FROM LIQUID WATER</p> <p>0.17B<sub>2</sub>O<sub>3</sub> (0.25 DOT)</p> <p>SBX</p> <p>THIS RETENTION IS NOT SUITABLE FOR EXPOSURE TO FORMOSAN TERMITES</p>
<p>J F M A M J J A S O N D 2001</p>	

EXHIBIT: GGG  
PAGE 4 OF 4