D STATES ENVIRONMENTAL PROT. FION AGENCY

6836-212

12/27/2006

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Mr. Eliot Harrison Agent for Lonza, Inc. Lewis & Harrison 122 C Street, NW Ste 740 Washington, DC 20001

Subject:

Bardac Wood Preservative (WP) Concentrate 80

EPA Registration No. 6836-212

Amendment Date: December 19, 2003 EPA Receipt Date: December 30, 2003

Dear Mr. Harrison,

The following amendment submitted in connection with registration under FIFRA section 3(c)(7)(A) is acceptable with the conditions listed below.

Mold Control on Indoor structural wood, particle board, oriented strand board, sheathing, insulation and drywall

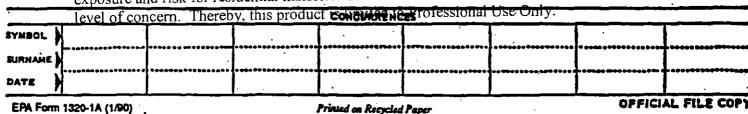
Occupational and Residential Exposure Assessment Summary

Handlers

Two exposure scenarios for occupational and residential handlers were assessed, mixing/loading liquids for hand-held backpack sprayer application and applying liquids with a hand-held/backpack sprayer. Inhalation Margin of Exposures for worker and residential handlers were above 100, and not of concern.

As per the rational presented in the Didecyl Dimethyl Ammonium Chloride (DDAC) Reregistration Eligibility Decision (RED), the occupational dermal MOEs for DDAC were not calculated. The personal protective equipment (PPE) requirements on the existing label were used as the default. To minimize dermal exposures, the minimum PPE for mixers, loaders, and applicators containing concentrations of DDAC that result in classification category I, II, or III for skin irritation potential will be long-sleeve shirt, long pants, shoes, socks, chemical resistant gloves, and chemical resistant apron.

Conversely, the residential dermal MOEs for DDAC were assessed since a requiring personal protective equipment is not considered as a feasible means of reducing exposure and risk for residential handlers. Residential dermal MOEs were below the



EPA Form 1320-1A (1/90)

Occupational and Non-Occupational Post-Application

Since DDAC is nonvolatile and not likely to generate sufficient vapor to cause inhalation concern to occupational handlers performing post-application tasks. Dermal post application risks are likely to be minimal because the treated wood will be covered by wallboard or other materials; 2) treated surfaces should be dry when handled by workers; and 3) most treated surfaces will already be in place and will not be handled by workers. Therefore, the dermal and inhalation post-application exposures were not quantitatively evaluated.

Post-application residential dermal and inhalation exposures are not significant since adults and children are not likely to come in contact with the DDAC treated materials for mold control in residential settings based on the "Professional Use Only" limitation. Thus, residential post-application exposures were not evaluated.

Conditions

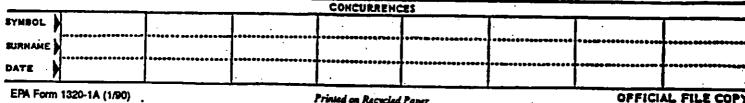
Revise the label as follows:

The Agency found that there were dermal exposure concerns associated with residential handlers applying this product as a remedial treatment for mold. Due to these concerns, you have agreed to limit the application of this product to "Professional Use Only."

Under "On-Site (in situ) Treatment" on page 2, add the statements:

"For use by Mold Remediation Workers, Mold Remediation Contractors, Certified Mold Remediators, Certified Mold Contractors, Certified Mold. Remediation Contractors, Applied Microbial Remediation Technicians, Certified Mold Professional, Certified Restorers, and Mold Remediation Companies, and Professional Water Damage Companies."

- 2) On page 3, revise the following statements to reflect the following such that they are in agreement with mandatory language as per PR Notice 2000-5.
 - Surfaces must be evenly wet without runoff or pooling.
 - The following Personal Protective Equipment must be worn use solution.
 - c) Consult the following associations and Internet sits for information ... mold and mildew.
- 3) Add the following statement under "Cleanup Methods," "Before applying Bardac Wood Preservative 80 and Bora-Care, visible mold growth must be removed and conditions favorable to mold growth must be identified and corrected." Use one of the following methods or another preferred professional method:



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- 4) Since this product has been limited to "Professional Applicators Only", the two paragraphs preceding Medium-Total Surface Area should be moved to the end of the section to serve as additional guidance.
- 5) On page 5, Revise the statement, "**Use professional judgement to determine..." to read "Use professional judgement to determine the appropriate level of Personal Protedctive Equipment (PPE) considering the potential for remediator exposure and size of contaminated area."

General Comments

This product is only for sale to and application by Mold Remediation Workers, Mold Remediation Contractors, Certified Mold Remediators, Certified Mold Remediation Contractors, Applied Microbial Remediation Technicians, Certified Mold Professional, Certified Restorers, and Mold Remediation Companies, and Professional Water Damage Companies.

A stamped copy of the accepted labeling is enclosed. Submit one (1) copy of your final printed labeling before distributing or selling the product bearing the revised labeling.

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

If the above conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6 (e). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions. Should you have any questions concerning this letter, please contact Jacqueline McFarlane at (703) 308-6416.

Sincerely,

Velma Noble

Product Manager (31)

Regulatory Management Branch I Antimicrobials Division (7510P)

Enclosure: Stamped Label

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Corrosive. Causes irreversible eve damage and skin burns. May be fatal if swallowed or inhaled. Harmful if absorbed through skin. Do not get in eyes, on skin or on clothing. Wear goggles or face shield, protective clothing and impervious gloves. Do not breathe dust, vapor or spray mist. Wash thoroughly with soap and water after handling and before eating, drinking and using tobacco.

Individuals who enter pressure treatment cylinders and other related equipment that are contaminated with the wood treatment solution (e.g. cylinders that are in operation or are not free of the treatment solution) must wear protective clothing including overalls, jacket, gloves and boots impervious to the wood treatment formulation. Federal, state and local confined space entry procedures must be followed.

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 formulation (e.g., manually opening/closing cylinder doors, moving trams out of cylinders, mixing chemicals, handling freshly treated wood).

Discard clothing and other absorbent materials that have been drenched or heavily contaminated. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining protective equipment. If no such instructions exist for washables, use detergent and hot water. Keep and wash protective equipment separate from other laundry.

ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not contaminate water by cleaning of equipment or disposal of wash waters. 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 plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

PHYSICAL AND CHEMICAL HAZARDS

ACCEPTEL Do not use or store near meat Grober Harre.

Inder the Pederal Insecticide Pungicide, and Rodenticide Action amended, for the pesticide,

Bardac Wood Preservative questioned under EPA Rec. 305-212) / Page 1 of 5 / 2/23:06

BARDAC WOOD PRESERVATIVE 80

Active Ingredient:

Didecyl dimethyl ammonium chloride Inert Ingredients:

80.0% 20.0%

TOTAL:

100.0%

Contains 7.4 lbs. of product per gallon

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 eve. 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

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.

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

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression, and convulsion may be needed.

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

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or doctor for treatment advice.

6836-212

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Manufactured by LONZA, Inc. 17-17 Route 208, Fair Lawn, NJ 07401

BARDAC WOOD PRESERVATIVE 80 is a concentrated biocide for use as a wood preservative. When used as directed, BARDAC WOOD PRESERVATIVE 80 will protect treated wood articles from the destructive attack of fungi, mold, mildew and both *Reticulitermes* and Ciotiternes species of termites. Treatment can be done by pressure, double vacuum and/or dip methods, although dip treatment can not be used for protection against termites. Wood articles that will be protected by these treatments would include millwork, construction timbers, decking, wood shingles, posts and other articles to be used in above ground applications.

DIRECTIONS FOR USE

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

BARDAC WOOD PRESERVATIVE 80 can be used alone or in combination with other EPA-registered organic and inorganic wood preservatives.

- BARDAC WOOD PRESERVATIVE 80:
 Dilute BARDAC WOOD PRESERVATIVE 80 in either water or mineral spirits to produce a 0.5% to 3.0% active quaternary ammonium compound (DDAC) solution.
- 2) BARDAC WOOD PRESERVATIVE 80 and Borates: Mix BARDAC WOOD PRESERVATIVE 80 and BORA-CARE EPA Reg. No. 64405-1, or Cellu-Treat DOT Wood Preservative, EPA Reg. No. 64405-8, in water and stir to give a solution of the desired concentration of components following the use directions of each label.
- 3) BARDAC WOOD PRESERVATIVE 80 and Copper Compounds: Mix BARDAC WOOD PRESERVATIVE 80 with water and either ACQ-C2, EPA Reg. No. 10465-36 or ACQ-C, EPA Reg. No. 10465-33. Refer to the product labels for ACQ-C and ACQ-C2 for precise mixing instructions.
- 4) BARDAC WOOD PRESERVATIVE 80 and Propiconazole: Mix BARDAC WOOD PRESERVATIVE 80 and Safetray P, EPA Reg. No. 43813-15 and dilute with either water, mineral spirits or other light organic solvent to produce a 0.5 – 3.0% quaternary ammonium compound (DDAC) solution. Follow the instructions on the Safetray P label for the appropriate concentration of propiconazole PLEASE NOTE THAT THIS FORMULATION CAN ONLY BE USED FOR DIP TREATMENT.

PRESSURE TREATMENT:

Place the wood article to be treated into the pressure cylinder and seal unit. Treat the wooden articles using the pressure treatment procedures consistent with the equipment being used and standard treatment practices. Treatment conditions should be such as to produce a 0.1 to 0.6 lbs/ft³ retention DDAC in the treated article. For protection against termites, wood must be treated to a minimum of 0.38 lbs/ft³. Such treated wood is to be used for above ground uses only.

DOUBLE VACUUM:

Stack the wood articles to be treated in the treatment vessels so that the preservative solution will have access to all sides of the articles. Seal the vessel. Reduce the pressure within the vessel to –10 inches for five minutes. Cover all the articles with preservative solution. Reduce the pressure to –20 inches and maintain for 20 minutes. Allow pressure to return to atmospheric and remove treated wooden articles. Treatment conditions should be such as to produce a 0.1 to 0.6 lbs/ft³ retention of DDAC in the treated article. For protection against termites, wood must be treated to a minimum of 0.38 lbs/ft³. Wood treated to this retention is suitable for above-ground use only.

DIP TREATMENT:

Stack the wood to be treated on a suitable holder and convey the stack into the treating solution making sure that the stack is completely immersed. Dip time should range from 30 seconds (individual pieces) up to 30 minutes (bundled wooden articles). Use a concentration of 0.5 – 3.0% active quaternary compound (DDAC); the concentration should be customized to the degree of sapstain protection desired, which should be determined by an independent test on the intended species of wood. Dip treatment should not be used when protection against termites is desired.

ON-SITE (in situ) TREATMENT

BARDAC WOOD PRESERVATIVE 80, in combination with BORA-CARE, EPA Reg. No. 64405-1, can also be used as an on-site preventative and, if needed, remedial treatment for indoor structural wood (framing lumber), particle board, cellulosic panel products (plywood, oriented strand board and sheet rock) sheathing and insulation. BARDAC WOOD PRESERVATIVE 80 and BORA-CARE will prevent mold growth and control decay and wood destroying insects in new and renovated construction and kill and control molds in existing structures that require remediation.

Follow the mixing and application instructions below for using BARDAC WOOD PRESERVATIVE 80 in combination with BORA-CARE. Apply the use-solution to new or renovated construction at the "dried in" stage of construction when all structural wood is in place but prior to the installation of drywall, insulation, mechanical systems and electrical wiring. When treating sheet rock in susceptible areas such as fire walls, apply the use-solution prior to painting.

Use BARDAC WOOD PRESERVATIVE 80/BORA-CARE for remedial treatments, as follows: 1) after flooding has occurred or 2) for spaces, particularly crawl spaces, that are prone to mold buildup due to humid conditions. When treating flooded areas, the insulation must be removed prior to treatment and then the use-solution should be applied to bare wood. Read carefully and follow the instructions below prior to any remediation treatment.

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Do not treat materials that will be used as food-contact surfaces or are currently used as food-contact surfaces. When used on the interior sides of living spaces, the treated surfaces must be subsequently covered with overlayment materials such as wallpaper, paint or similar coatings.

BARDAC WOOD PRESERVATIVE 80 and BORA-CARE must be mixed prior to application. Follow the instructions below for proper mixing.

Mixing Procedure:

- 1. Pour 4 gallons of water into a six-gallon pail.
- 2. Attach mixing impeller to drill and begin agitation
- 3. Gradually add 1.0 gallon of BORA-CARE and 1 pint of BARDAC WOOD PRESERVATIVE 80 into the pail of water and continue to mix solution.
- 4. Use 1 gallon of water to triple rinse the BARDAC WOOD PRESERVATIVE 80 and BORA-CARE containers and pour contents into the mixing solution Continue to mix until solution is fully mixed. Normal mixing time may be 5 minutes. Warm water will reduce mixing time.

NOTE: Do not allow mixing impeller to touch sides or bottom of pail. This may create small plastic chips that could clog spraying equipment.

Application Instructions:

Use a 2-4 gallon hand-held stainless steel sprayer or backpack sprayer to apply up to 2-4 gallons of the BARDAC WOOD PRESERVATIVE 80 /BORA-CARE use-solution at a time. For larger amounts, a 10-100 gallon spray unit with mechanical pump is recommended. One gallon of the use-solution will treat 400 board feet of wood or 400 square feet of sheathing, insulation or drywall.

Assure uniform coverage of surfaces to be treated. Surfaces should be evenly wet without runoff or pooling. Permit treated surfaces to be thoroughly dry before painting or affixing overlayment materials such as siding, wallboard, or flooring.

The following Personal Protective Equipment should be worn during application of the BARDAC WOOD PRESERVATIVE 80 /BORA-CARE use-solution:

- Protective Eyewear
- Long Pants
- Long-Sleeved Shirt
- Chemical-Resistant Gloves
- Full-face respirator with HEPA filter (required if application is in a confined area).

REMEDIAL TREATMENT

BARDAC WOOD PRESERVATIVE 80 must be used as part of a comprehensive mold remediation or water damage restoration program. includina:

- · Periodic monitoring and inspection of conditions favorable to mold growth such as moisture ingress and high relative humidity.
- Effecting repairs as necessary to eliminate conditions favorable to mold arowth.
- Drying of effected areas to below 20% moisture content.

For remedial treatment, follow the mixing and application instructions provided above.

The following associations and Internet sites should be consulted for information on standards and guidelines for remedial treatment of mold and mildew.

- IAQA-Indoor Air Quality Association (www.iaga.org)
- EPA-Environmental Protection Agency (www.epa.gov)
- DOH-New York City Dept. of Health (www.ci.nyc.ny.us/html/doh)
- IICRC-Institute of Inspection, Cleaning and Restoration Certification (www.iirc.org)

Small Areas - Total Surface Area Effected is Less than 10 square Feet

Cleanup Methods

Wood Surfaces

Prior to applying BARDAC WOOD PRESERVATIVE 80 and BORA-CARE, clean the effected area using one of the following or another preferred professional method.

Method 1: Wet vacuum (in the case of porous materials, some mold spores/fragments remain in the material but will not grow if the material is completely dried).

Method 2: Damp-wipe surfaces with plain water or use a wood floor cleaner; scrub as needed.

Method 3: High-efficiency particulate air (HEPA) vacuum after the material has been thoroughly dried. Dispose of the contents of the HEPA vacuum in wellsealed plastic bags.

Minimum personal protective equipment to be worn during clean-up includes gloves, N-95 respirator and goggles/eye protection.

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Gloves, disportation wit equipment.

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Use two lay Maintain are outside of b Special procedures and training are required for remediation of moldy areas larger than 10 square feet. Consult guidelines for remediation of large areas established by the Indoor Air Quality Association (www.iaga.org) and the U.S. Environmental Protection Agency (www.epa.gov). An excellent reference is the New York Department of Health publication, "Guidelines on Assessment and Remediation of Fungi in Indoor Environments." An excellent guide for professional mold remediation is available from the Institute of Inspection, Cleaning and Restoration Certification (IICRC). Standard \$520 is based upon reliable remediation and restoration techniques, and combines academic principles with practical elements in water damage restoration. When structural members and/or contents have been exposed to water in excess of 24 hours, there is a possibility of extensive microbial growth that may be hidden. In such a case, a complete assessment and remediation plan must be prepared that provides for user and occupant safety and documentation and monitoring of the remediation process. IICRC S520 contains excellent guidance for such a plan. In the context of such a plan, BARDAC WOOD PRESERVATIVE 80 and BORA-CARE can be used on materials to be removed and disposed of and in other applications where mold inhibition is indicated. The Standard must be followed exactly and all growth and contaminated organic material removed prior to using BARDAC WOOD PRESERVATIVE 80 and BORA-CARE. Before using BARDAC WOOD PRESERVATIVE 80 and BORA-CARE in mitigation of large projects, you should be knowledgeable of these guidelines and follow their recommendations.

In the absence of access to the guidance and standards identified, the user should refer to the following information taken from U.S. EPA's guide – *Mold Remediation in Schools and Commercial Buildings* (March, 2001). These guidelines are based on the area and type of material affected by water damage and/or mold growth. Please note that these are guidelines; some professionals may prefer other cleaning methods. Use appropriate remediation steps prior to application of BARDAC WOOD PRESERVATIVE 80 and BORA-CARE.

Medium - Total Surface Area Affected Between 10 and 100 Square Feet

Cleanup Methods

Wood Surfaces

Method 1: Wet vacuum (in the case of porous materials some mold spores/fragments remain in the material but will not grow if the material is completely dried or treated).

Method 2: Damp-wipe surfaces with plain water or use a wood floor cleaner; scrub as needed.

Method 3: High-efficiency particulate air (HEPA) vacuum after the material has been thoroughly dried. Dispose of the contents of the HEPA vacuum in well-sealed plastic bags.

Wallboard (drywall and gypsum board)

Prior to applying BARDAC WOOD PRESERVATIVE 80, clean affect using high-efficiency particulate air (HEPA) vacuum after the materisthoroughly dried. Dispose of the contents of the HEPA vacuum in we plastic bags.

Limited or full personal protective equipment is recommended durin Limited personal protective equipment includes gloves, N-95 respira face respirator with HEPA filter, disposable overalls and goggles/ey Full personal protective equipment includes gloves, disposable full to clothing, hear gear, foot coverings, and a full-face respirator with HE

Use professional judgment - consider potential for remediator exposize of contaminated area.

<u>Large – Total Surface Area Affected Greater Than 100 Square F</u>

<u>Potential for Increase Occupant or Remediator Exposure Durin</u>

<u>Remediation Estimated to be Significant</u>

Cleanup Methods

Wood Surfaces

Method 1: Wet vacuum (in the case of porous materials, some mol spores/fragments will remain in the material but will not grow if the r completely dried.

Method 2: Damp-wipe surfaces with plain water or with a wood floo scrub as needed.

<u>Method 3:</u> High-efficiency particulate (HEPA) vacuum after the mat been thoroughly dried. Dispose of the contents of the HEPA vacuu sealed plastic bags.

Method 4: Discard/remove water-damaged materials and seal in planting while inside of containment, if present. Dispose of as normal waster vacuum area after it is dried.

Wallboard (drywall and gypsum board)

Method 1: High-efficiency particulate (HEPA) vacuum after the mate been thoroughly dried. Dispose of the contents of the HEPA vacuu sealed plastic bags.

<u>Method 2:</u> Discard/remove water-damaged materials and seal in pl while inside of containment, if present. Dispose of as normal waste vacuum area after it is dried. Gloves, disposable full body clothing, head gear, foot coverings, full-face respirator with HEPA filter are the recommended personal protective equipment.

Select method most appropriate to situation. Since molds gradually destroy the things they grow on, if mold growth is not addressed promptly, some items may be damaged such that cleaning will not restore their original appearance. If mold growth is heavy and items are valuable or important, you may wish to consult a restoration/water damage remediation expert. Please note that that these are guidelines; other cleaning methods may be preferred by some professionals.

"Use professional judgment to determine prudent levels of Personal Protective Equipment and containment for each situation, particularly as the remediation site size increases and the potential for exposure and health effects rises. Assess the need for increased Personal Protective Equipment if during the remediation, more extensive contamination is encountered than was expected. These guidelines are for damage caused by clean water. If you know or suspect that the water source is contaminated with sewage, or chemical or biological pollutants, then the Occupational Safety and Health Administration (OSHA) requires PPE and containment. An experienced professional should be consulted if you and/or your remediators do not have expertise in remediating contaminated water situations.

Containment of Affected Materials

Total Surface Area Affected Between 10 and 100 Square Feet (all surfaces) Use polyethylene sheeting ceiling to floor around affected area with a slit entry and covering flap; maintain area under negative pressure with HEPA filtered fan unit. Block supply and return air vents within containment area.

Total Surface Area Affected Greater than 100 Square Feed or Potential for Increased Occupant or Remediator Exposure During Remediation Estimated to be Significant

Use two layers of fire-retardant polyethylene sheeting with one airlock chamber. Maintain area under negative pressure with HEPA filtered fan exhausted outside of building. Block supply and return air vents within containment area.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Do not store on side. Avoid creasing or impacting of side walls.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these pesticides cannot be disposed of by use 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: Plastic Container: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or, if allowed by state and local authorities by burning. If burned, stay out of smoke. **Metal Container:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved state and local authorities.