



## RURAL DEVELOPMENT

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*Dedicated to Strengthening and Serving Rural America*

**SUBJECT:** ARCHITECTURAL TECHNICAL GUIDE 0001 – March 14, 2002  
Termite Inspection, Treatment and Certification:  
Requirements for New and Existing SFH and MFH Construction Projects

### **PURPOSE:**

The primary purpose of this technical guide is to summarize current Rural Development requirements for termite investigation and eradication in new and existing construction being funded under the authorities of Single Family Housing Programs and Multi-Family Housing Programs in Colorado. A secondary purpose is to provide technical information regarding the nature of the problem and contemporary remediation strategies.

### **IMPLEMENTATION RESPONSIBILITIES:**

Rural Development shifted its protocol for dealing with termite infestation in housing construction from policies issued by individual State Offices to a standardized National policy in 1998 when the U.S. Department of Housing and Urban Development (HUD) instituted the usage of a series of new forms developed by the National Pest Control Association (NPCA) in place of its own form, HUD 92052, "Termite Soil Treatment Guarantee". This was in part due to the availability of new termite infestation treatment methods developed in the 1990s and to the recognition that no more chemical treatment should be applied than necessary, for the sake of the environment. The new Rural Development policy was formalized by RD AN No. 3395 (1924-A), "Acceptance of New Termite

Forms", issued on April 20, 1998, which implemented the usage of the following NPCA forms:

Form NPCA-99a, "Subterranean Termite Soil Treatment Builder's Guarantee". This form provided the text of the guarantee. The treated structure was guaranteed against infestation for five years by the builder, however, the cost of repairing damage caused by termite infestation was only guaranteed for only one year by the builder. Certain site improvements (i.e. landscaping mulches) constructed by the property owner were capable of voiding the guarantee. Disputes were to be resolved by the acceptance of the opinion of an "unbiased expert" with the cost of the investigation to be borne by the non-prevailing party.

Form NPCA-99b, "New Construction Subterranean Termite Soil Treatment". This was an additional required form to document cases where soil treatment was to be applied. This form mainly required the applicator to document the type of soil treatment service to be provided.

Form NPCA-1, "Wood Destroying Insect Infestation Inspection Report". This was a report-of-inspection form intended to provide information concerning existing buildings. It resulted in either a statement of observed termite presence or no observed termite presence. It also provided opinions regarding whether observed evidence was believed to be active or inactive; whether treatment was recommended; and whether further investigation was recommended.

Finally, the form contained a clause which would authorize the inspecting firm to provide termite treatment (apparently if it had been requested at the outset).

Rural Development issued RD AN No. 3516 (1924-A), "Acceptance of Revised Subterranean Termite Treatment Builder's Certification and Guarantee", on February 3, 2000 to reflect that Form NPCA-99a had been revised and the newer version would have to be accepted in lieu of the older version effective April 4, 2001. It also noted that Form NPCA-99b would only be required if soil termite treatment were involved. Fundamentally, the revised form deviated from the original version in two respects. The application of a liquid termiticide was no longer determined to be the only means of achieving the desired effect as bait systems, wood treatment, and soil treatment were all listed as approved methods. Also, the term of the basic guarantee against infestation was reduced from five years to a one year period with an option to renew.

Both RD ANs deferred the determination of where termite inspection and treatment were required to the individual State Offices. For Colorado, these were always determined by the State Office to be necessary at elevations below 8,500 feet above sea level and this policy remains unchanged.

The Colorado State Office has historically regularly issued a Colorado AN which disseminated a listing of all applicators approved by the Colorado Department of Agriculture, for field office verification purposes. This practice is being discontinued by this AN as the NPCA forms are self-certifying that applicators are complying with applicable Federal and State requirements.

Soil treatment was traditionally the primary method for chemically controlling subterranean termites in Colorado, however new technologies were developed in the 1990s in an attempt to reduce the overall amount of toxins being expended into the subsoil environment. Some of the new technologies

included baiting and lumber treatment. The nature of the termite hazard and viable treatment methods are discussed in more detail in Exhibit A to this AN.

All requirements of this Administrative Notice should be fully explained to applicants, contractors, and lenders, as appropriate, prior to obligating funds. Should you have any further questions on this subject, please contact the State Architect.

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State Architect  
USDA/Rural Development

Attachments:                   Exhibit A, "*More on Termites....*"

## More on Termites....

### Termites in Colorado

The termites commonly found in Colorado are called subterranean termites because they live underground. Termite colonies are highly organized societies of several hundred thousand to one million or more individuals within a loose collection of underground tunnels and chambers. Workers (1/8-inch, creamy white, wingless, segmented body, bead-like antennae) are the most numerous members of the colony.



They build and maintain the nest, care for the immatures, and forage for food to eat and carry back to the nest. Termite food consists of wood and other cellulose products such as paper and cardboard. Reproductives (i.e., queens and kings) produce the new offspring, while soldiers guard the colony from invasion. Swarmers (3/8-inch, straight-sided, black body, silver wings) are male and female adults that emerge from well-established colonies to attempt to establish new colonies.

Subterranean termite workers constantly explore for food by excavating a network of random, pencil-sized tunnels through the soil in the area surrounding their nest. Foraging may occur over considerable distances - up to 100 meters (330 feet) in some cases. Homes become infested when the termites find a way into the house during their constant and random search for food.

A termite infestation in the home is usually not obvious because most activity is concealed. Signs of a termite problem include the presence of pencil-wide mud foraging tubes on foundation walls, floor joists, etc., the presence of damage inside structural wood, drywall, paneling, molding, paper or cardboard, and emergence of swarmers.



The presence of termites in or near a house is reason for inspection of the house and property.

### Termite Treatment Options

For over 50 years, subterranean termites have been controlled by chemical barriers in the soil, around and beneath a structure. Special insecticides called termiticides are used for this purpose. A complete barrier treatment may require hundreds of gallons of termiticide solution. The water-based solution is injected 3 to 5 feet into the ground alongside the foundation, beneath concrete slabs (basement and garage floors, patios, sidewalks, and driveways), and within foundation walls.



A complete and continuous barrier of termiticide will block potential routes of termite entry and continue to protect the structure for years. Termites attempting to penetrate through the treated soil are either killed or repelled.

Pest control operators use several different termiticides. All are currently believed to be safe and effective when used carefully according to label directions and will remain effective in the soil for approximately 5 to 10 years.

The second termite control option is termite bait. Termite baits, available since approximately 1995, consist of a palatable and acceptable food material combined with a very slow-acting toxicant.

Termite baits deliver very small amounts of pesticide over a long period of time (up to several months). Control depends upon foraging termites finding the bait, feeding, and carrying it back for transfer throughout the entire colony during the normal process of food exchange within the colony.

Termite baits are dispensed through plastic boxes and tubes (bait stations). In-ground stations are buried just under the soil surface around the structure. Termites find the stations (and bait) during their random search for new food sources. Above ground stations are used indoors where termite feeding activity or tubing is occurring. Such placement speeds the baiting process but is not possible in all situations.



Baiting is a slow, long-term solution to the termite problem within a structure. A comprehensive baiting program seeks to maintain a termite-free condition through ongoing monitoring and rebaiting as needed.

A combination of barrier and bait treatments may be appropriate in some situations. Any treatment (barrier, baiting system or combination) can be done as prevention before termites begin to feed inside the house or as a cure to stop activity that has already started.

### **Advantages of Termite Barriers and Baits**

Conventional termiticide barrier treatments are believed to have controlled termites reasonably well for many decades with questions raised about their effect on the environment.

Termite baits are far less toxic than most liquid termiticides, an advantage to chemically concerned homeowners. Further, the total amount of pesticide applied in baits is minute compared to the hundreds of gallons of termiticide needed to completely treat a house in a thorough and effective manner. Termite baits target the pest species with little or no chance of impact on groundwater, wildlife or the environment. The risk of contamination of wells, heat ducts, drainage systems, etc. is negligible and baits can be used in the most sensitive treatment situations.

Baits are applied with no destruction or disruption to the house. No holes are drilled through floors or walls and furniture, stored items, and carpeting or flooring will not have to be moved or removed. Buildings with a history of chronic termite retreatment are logical candidates for termite baits as are houses with construction features that make barrier treatment difficult or impossible (wells, in-floor heating ducts, perimeter drainage systems, inaccessible crawl spaces, stone foundations, etc.).

Barrier treatments usually provide faster, if not immediate results that may be desirable in some situations. For example, you may not want to wait several months while baits suppress or eliminate the infestation in properties with a severe termite problem, or if there is a real estate transaction in process. Termites may continue to damage the home through the baiting process and delayed results may be unacceptable.

While barriers will provide longer control from a single visit or application, the termiticides can be expected to protect for only 5-10 years, after which time retreatment may be necessary. It is understood that control by bait is a long-term commitment to ongoing inspection, monitoring, and rebaiting when necessary. The costs for conventional and bait treatment are similar. When comparing prices consider both the initial treatment price and renewal fees.

### **Success of Termite Bait in Colorado**

Termite baits have been used to treat homes in Colorado since 1995 and the results of this new technology are being watched carefully. Most of the initial research with termite baits was done in the southern U.S. where termites are active year-round and soils and building construction practices are different than ours. However, the limited but rapidly-increasing amount of experience with the new bait products by pest control operators in Colorado and other Midwest states has been favorable.

Bait systems rely on termites locating (by random chance) the in-ground bait stations placed around the home. In research conducted in the southern states it sometimes took 3-5 months for termites to find the bait stations. In the northern states where termites are only active for about half the year the bait stations may not be found for a year or more. In Colorado, the length of time necessary for termites to find the in-ground stations has varied from as little as 2 days to as long as 2 years. However, termites have entered the bait stations within 1 year at approximately 80% of the houses treated. Bait stations appear to be found more rapidly when installed in the spring rather than in late summer.

Success with baiting requires frequent inspection in an ongoing monitoring program and rebaiting as necessary. While it is too early to know under what circumstances termite baits are going to be most effective, many houses have already been successfully treated (that is, termites or new termite activity has not been found during on-going inspections). Research to document whether successful control of termites is the result of colony suppression or colony elimination has not been done.

### **Foam Application Treatment**

Some termiticides may be applied by mixing them with a foaming agent and using a small compressed area tank which churns up the mixture into a shaving type foam and then pushes the foam into drilled opening. Foam offers some advantages in particular situations where liquid applications fail or will not reach needed areas.

### **Dust Treatment**

Dusts may be applied to wall voids or other areas where liquids or foam are impractical.

### **Direct Wood Treatment**

Certain new products are applied directly to wood. These will kill both subterranean and drywood termites. In other cases, equipment such the "Electrogun" are used to actually electrocute drywood termites.

### **Fumigation Treatment**

Tarp or tent fumigation is generally used for drywood termites although it can be used for other species as well. Fumigation will kill all insects in the treated area, but there are purportedly no residual properties which leaves the area quickly vulnerable once again.

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