



SECTION 02543

SEWER LINE CHEMICAL ROOT TREATMENT

PART 1 GENERAL

1.01 SCOPE

- A. This section covers the application of chemical root control agent to sanitary sewers, in order to kill the root growth present in the lines and to inhibit re-growth, without permanently damaging the vegetation producing the roots.

1.02 SUBMITTALS

- A. Action Submittals: Product data.
- B. Informational Submittals:
 - 1. Specimen label with Material Safety Data Sheet.
 - 2. Applicator's Federal DOT number and EPA material registration number.
 - 3. Applicator's qualifications.

1.03 QUALITY ASSURANCE

- A. Applicator Qualifications:
 - 1. Licensed as a pesticide application business with the Tennessee Department of Agriculture.
 - 2. Demonstrate a minimum level of 3 years experience in applying chemical sewer root control agents.
 - 3. Documentation of treatment of at least 500,000 feet of sanitary sewer similar in size and scope to the Work specified herein.
- B. Regulatory Requirements:
 - 1. Ensure compliance with Federal, State, and Local ordinances pertaining to the type of Work specified herein.
 - 2. Particular attention shall be paid to those laws and ordinances relating to handling, disposal, transportation of material (DOT), the application of sewer root control herbicides (EPS), and traffic safety regulations.
- C. Certificates: CONTRACTOR shall make available to OWNER on request, a recent study from an accredited research facility documenting the effects of the product on wastewater treatment plant facilities. At a minimum, this study shall address the toxicity of the product on wastewater treatment plant biota, including nitrifiers and denitrifiers, the toxicity of the product on treatment plant effluent, and the environmental fate of the product.

1.04 POLLUTION LIABILITY INSURANCE

- A. The Pollution Liability Insurance described herein is in addition to all other insurance (Section 00822) required of CONTRACTOR by OWNER, including any insurance described in the General Conditions, any insurance required by law, or any other insurance requested by OWNER.
- B. Pollution liability coverage shall protect CONTRACTOR, OWNER and any of their officers, agents and employees from claims for damages for bodily or personal injury, sickness or disease, including death, and from claims for damages to property or the environment, which may arise directly out of the use of chemicals or pollution. The minimum amount of such insurance shall be \$5,000,000 total loss. This insurance shall be provided to CONTRACTOR by an insurance company that holds at least an "A" rating by A.M. Best rating service. OWNER shall be named as additional insured parties on the Certificate of Insurance, which shall be furnished prior to starting the Work.

1.05 SPECIAL GUARANTEE

- A. Provide manufacturer's extended guarantee or warranty, with OWNER named as beneficiary, in writing, as special guarantee. Special guarantee shall provide for each sewer section (manhole to manhole) that is treated to be guaranteed as follows:
 - 1. At the option of the OWNER, the CONTRACTOR shall at its own expense, re-treat a sewer section, or refund 100 percent of the payment received to treat that section in the event that: 1) live roots are found in the section within 6 months after the application; or 2) the section plugs up and floods due to tree root obstructions within a period of 2 years, beginning on the date of treatment and ending 2 years after the date of treatment. Re-treatments, performed at no charge in honor of the guarantee, do not extend the expiration date of the guarantee.
 - 2. The guarantee applies to sewer stoppages caused by live tree roots. It does not apply to stoppages caused by grease or other foreign matter; flat collapsed or deformed pipe; or flooding caused by a surcharged or plugged sewer section downstream from a guaranteed sewer section. This guarantee applies to main line sewers only. CONTRACTOR is not responsible for any damages caused by main line sewer stoppages, regardless of cause. The decision of the OWNER as to the cause of a stoppage is binding.

1.06 MAINTENANCE

- A. CONTRACTOR shall return every 4 months to 8 months throughout the life of the guarantee, in order to evaluate the success of the Projects, and to arrange any free guarantee work that may arise.

PART 1. PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Materials, equipment, and accessories specified in this section shall be products of Razorooter II.

2.02 MATERIAL

A. Requirements:

1. Registered with the EPA and the Tennessee Department of Agriculture.
2. Labeled for use in sewers to control tree roots.
3. Contain an active ingredient for controlling tree roots and deterring their re-growth.
4. Contain a surfactant system to deliver the active ingredient (herbicide) to the target root tissue.

B. Active Ingredients:

1. Category "E" compound.
2. Not considered a carcinogen, teratogen, mutagen, or oncogene, based on laboratory testing.
3. Carry a "signal word" assigned by EPA of either "Warning" or "Caution" on the product label. Pesticides carrying the "signal word" "Danger" shall not be accepted.
4. Nonvolatile, in order to minimize exposure to workers and other individuals by inhalation.
5. Not readily absorbed through the skin.
6. Products containing the active ingredient(s) metam-sodium or copper sulfate are not allowed.

C. Surfactant System:

1. Produce a dense, small bubble, clinging foam, which sustains its shape for a minimum of 1 hour.
2. Enhance the penetration of herbicide into root masses.
3. Contain an alkylpolyglucoside (formulations of vegetable oil and carbohydrate from agricultural products).
4. Surfactants designed to foam chemical, upon contact with water, shall not be accepted.



PART 3 EXECUTION

3.01 GENERAL

- A. Where Work is located in high-traffic areas, CONTRACTOR shall place proper traffic warning devices to protect the Site and to prevent accidents or personal injury to the public.
- B. Use a reduced pressure zone backflow prevention device whenever accessing fresh water for mixing chemical.

3.02 APPLICATION

- A. Perform the Work according to label instructions and in accordance with the best recommended practice for conditions present in the line under treatment. Application shall be done by foaming or other methods as provided on the product label.
- B. Perform in such a way as to contact roots within the primary main line sewer to be treated. Make effort to penetrate secondary lateral sewers in order to contact roots residing in the “wye” connections.
- C. Generate foam through the use of air injection equipment and pump the foam into the sewer under pressure as foam. Foam quality shall be sufficient to penetrate “wye” connections, effectively treat large diameter pipe, and to enhance treatment effectiveness overall.
- D. Hydraulic sewer cleaning machines will reduce treatment effectiveness by damaging root growths and inhibiting their uptake of chemical. Hydraulic sewer cleaning machines shall not be used prior to or during the treatment process.

3.03 PROTECTION OF WASTEWATER TREATMENT PLANT

- A. CONTRACTOR shall take all steps necessary and appropriate to prevent adverse effects on wastewater treatment plant processes during the application process.
- B. In the event that a wastewater treatment plant experiences any reduction in operating efficiency during the execution of the Contract, CONTRACTOR shall immediately suspend all applications, at the direction of the OWNER. CONTRACTOR shall continue operations only after problems at the wastewater treatment plant have been corrected, satisfactory to the wastewater treatment plant operator.

END OF SECTION