

# **Technical Specification**

## **Foaming Root Control Contract Services**

**CONTRACTOR SPECIFICATION FOR FOAMING ROOT CONTROL  
HERBICIDE FOR USE IN SANITARY SEWERS  
(as provided by Vaporooter)**

**I. LINE PREPERATION PRIOR TO COMMENCING FOAM HERBICIDE APPLICATION:**

***A. IF CLEANING IS NECESSARY, before a foam treatment application the following procedures are recommended:***

***B. Use of hydraulic jet cleaning is the preferred method. It is desirable to allow such cleaning to PRECEDE the application of root control herbicides by a minimum of six (6) weeks and no longer than sixteen (16) weeks for maximum benefit.***

***C. Mechanical cutting of roots is NOT RECOMMENDED, unless there is such dense root intrusion (60% or higher) that it will constrict flow of the foam, passage of the hose, or prohibit effective access for treatment. If mechanical cutting must be used, do so at least six (6) weeks prior to application of the root control herbicides.***

**II. FOAMING ROOT CONTROL HERBICIDE:**

***A. The Customer acknowledges that lines foamed for root control need to be left undisturbed after treatment for a minimum of six (6) months, so that the BIOLOGICAL DISINTEGRATION of the root masses can take place. If the city for any reason uses a hydrocleaner in a line which has been previously foamed, it shall be recorded in the line history file within 30 days.***

***B. The city is aware that the high pressure water can wash away the herbicide which inhibits root re-growth. When root control treatment precedes application of grouting or sealing compounds used in some rehabilitation processes, a waiting period of at least SIX (6) weeks is recommended prior to the removal of dead roots. Dead roots can be removed with a mechanical root cutter.***

***C. The use of high-pressure water should always be avoided after foaming for root control as it can wash away the root growth inhibiting herbicide.***

***D. The foaming herbicide must be such that the foam is delivered and deposited evenly and uniformly throughout the treated sections of sanitary sewer line by means of jetting the hydrocleaner hose between manhole section(s) and retrieving the hose during the foaming process.***

***E. The foaming root control product shall be composed of two (2) distinct and separate non-systemic herbicides for controlling roots in sewer lines. It shall have a water dispersible formulation of a contact herbicide, Sodium***

***Methyldithiocarbamate (anhydrous) with a foaming surfactant system in the concentrate packaged in five (5) gallon containers.***

***F. Five (5) gallon containers must be packaged together with a growth inhibitor, Dichlobenil 50W in water soluble pouches.***

***G. The product must be currently registered with the EPA for root control use in sanitary sewer lines, and must additionally be registered in the state in which it is sold.***

***H. The product must have a minimum twenty (20) years of use by municipalities. The active herbicide ingredients shall not have any plant species known to be resistant to its herbicidal effects.***

***I. The foaming herbicide shall contain no heavy metals compounds in any of its components.***

### **III. APPLICATION METHODS**

***A. The foam must be generated by a machine that assures the foam will completely fill the intended pipe thereby thoroughly coating the roots with herbicide and depositing sufficient quantities of growth inhibiting material. No “water activated” foam products shall be used.***

***B. The foaming root control herbicide shall not be applied through a hydrocleaner pump without an additional compressed air system, which is necessary to create high quality foam to properly coat roots.***

***C. The foaming root control herbicides will be mixed with water to produce a solution. The solution will yield a minimum 20 gallons of foam for each gallon of solution.***

***D. The hose must utilize a two stage nozzle with the capacity to first “jet” downstream, then foam as the hose is withdrawn. The nozzle should be positioned on a skid at the center line of the pipe and should be positioned such that the nozzle will be at least one (1) inch above the flow in the pipe at all times. The nozzle shall be withdrawn at the rates recommended by the herbicide manufacturer. During the withdrawal of the hose, foam must be injected into the pipe in such a manner as to fill the line completely with the herbicidal foam.***

***E. For lines 12” or larger, the line may be “foam-coated” by means of pulling a properly designed nozzle between manholes, depositing herbicidal foam on the upper interior walls of pipe. The coating shall start at the 3 and 9 o’clock positions in the pipe wall and completely coat up to and including the pipe crown.***

### **IV. APPLICATION EQUIPMENT**

***A. Contractor will provide all equipment using proper operation and safety procedures to perform the work. A hydrocleaner, not manual insertion, must accomplish hose insertion into sewer line, to assure maximum applicator safety. Contractor shall not enter manholes at any time during the chemical root control application process. Bidder shall provide technical data on chemical loading operations and application. The contractor must employ all precautions and handling requirements on the product label.***

***B. The equipment used in foam generation shall meet the herbicide manufacturer's specifications and be capable of generating the specified quantity and quality of foam as described above.***

## **V. RECORD KEEPING**

***A. The contractor shall compile records for each line segment in which root control chemicals are applied. Such records shall:***

- 1. Be accurate, complete and legible;**
- 2. Include the date of treatment, sections of line treated with Metam Sodium+Dichlobenil foaming root control, amount of chemical concentrate used, equipment used, percentage of Grease Release used during hydrocleaner operation, and any other pertinent data the city finds applicable.**
- 3. Note special field conditions, access problems or unusual line conditions; including abnormal flow.**
- 4. Record weather conditions and temperatures; and**
- 5. Be submitted in accordance with the Customer's inspector's requirements.**

## **VI. CONTRACTING SERVICES/QUALIFICATIONS:**

***A. All contractors bidding should provide proof of CERTIFICATION and TRAINING by the herbicide manufacturer.***

***B. Only CERTIFIED CREWS shall be used for application of the herbicide systems of root control herein described.***

***C. All contractors bidding must be licensed by the state to apply "RESTRICTED USE" chemicals in sewer lines.***

## **VII. INSURANCE REQUIREMENTS:**

**A. The insurance requirement shall be in accordance with the City's policies or regulations for contracts of similar size and scope.**