

City of Santa Barbara
MATERIAL EXEMPTION REQUEST FOR PESTICIDE APPLICATION

Dept Public Works IPM Coordinator Jim Dewey Phone 564-5568
Pesticide Applicator (employee or company) Name _____ Phone _____
Application Site 7.3 miles of sanitary sewer mains Specific Location See attached map
Date(s) Estimated project duration will take place in March of 2014 and will take 2-3 weeks to complete.
Product Name Razeroooter II Active Ingredient Diquat Dibromide
Number of Applications: One-time Other Once every 2 years or as needed.
• Type: Emergency Trial Programmatic Other

Product type: Herbicide Insecticide Fungicide Other _____
Application: Ornamental Turf Golf Vector Control Park Tree Street Tree
 Right of Way Vertebrate pest Other Sanitary Sewer Mains

Is the pesticide on the *Tiered Materials List*? No Yes If yes, provide the Tier _____
If the pesticide is not on the *Tiered Materials List*, provide the following screening information. See the IPM Strategy and the *Tiered Materials List* for instructions on screening the pesticide.

EPA Reg # 64898-8 Signal _____ Estimated Tier _____
Restricted No Yes/Describe Keep out of lakes, ponds or streams. May be toxic to humans, livestock, and aquatic life.
P Waste _____ PBT _____ WA PBT _____ Persistant _____ Mobil _____
Cancer _____ Repro _____ Neuro _____ Endocrine _____
Bird _____ Fish _____ Bees _____ Wildlife _____

Attach product label and MSDS to this form.

Describe the pest problem.

Root intrusion occurs in sanitary sewer mains. This happens when tree roots burrow their way into pipe walls through cracks, holes, joints, etc. Root intrusion in sewer mains can cause sanitary sewer overflows (SSO). In SSOs, sewage can flow into nearby creeks, neighborhoods, or the ocean, all of which are unfavorable locations for sewage to reside.

Describe the management goals and objectives for this site.

The goal for this site is to have reduced root growth and mass in sanitary sewer mains and therefore an overall reduction of SSOs in the collection system.

What is the damage threshold for this pest at this site?

The damage threshold for root intrusion in sewer mains is when it causes a SSO. SSOs due to root intrusion occur when roots block the flow of sewage.

Describe the monitoring of the pest and potential predators that was conducted and the control methods previously used at the site.

City sewer system maintenance crews have performed routine cleaning maintenance by hydro-jetting and CCTV inspection on the site. Hydro-jetting is performed by Vactor trucks.

Describe how the product would be applied including frequency, concentration, and method of application.

The product is applied in a similar matter as routine sewer cleanings are done by the City through use of Vactor trucks. Root foaming contractors apply the foam through a 600 ft PVC water service hose. The foam discharge hose will be conveyed through the sewer section by either pushing the foam discharge hose through the section, or floating a rope through the sewer section and using the rope to pull the foam discharge hose through the section. The foaming unit will discharge foam at 30 PSI, treating the sewer main and forcing the foam up into connecting house laterals approximately 10 to 15 feet. Hose retrieval rates are timed to evenly distribute the full quantity of foam throughout the entire area of pipe receiving treatment. Sewer service to homeowners will not be interrupted. Although more applications are not required,

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Razoroooter is typically applied on a 2-3 year basis by other cities. For the sewer mains being treated in this project, there are about 0.13 pounds of diquat cation being applied per 100 feet. Duke's Root Control will apply Razoroooter to a total of 38,648 ft of sewer mains. In addition to treating sewer mains, Duke's Root Control will apply foam on manholes that are used to access the sewer segments for treatment.

What non-target impacts are anticipated?

The El Estero Wastewater Treatment Plant receives the discharge from the sewer mains that will be treated with Razoroooter. High concentrations of Razoroooter may adversely affect the biological sewage breakdown process in wastewater treatment plants. To counter this problem, Duke's Root Control will notify El Estero Wastewater Treatment Plant prior to applications. Treatment plant operators will monitor treatment plant influent quality and notify applicators in event that adverse affects begin in the treatment process, and applications will stop before any biological unit process within the treatment plant is impacted.

How does the use of this product help achieve the site management goals? Note if this is curative or preventative.

This product inhibits root growth and kills roots in sewer mains and therefore lessens the frequency of SSOs due to root intrusion. This is a preventative solution.

How will the effectiveness of this product be monitored? Include expected results and indicators of success.

City CCTV crew will inspect or clean various treated sewer lines within a year of application to determine if root growth has decreased due to the application of Razoroooter. It is expected that the CCTV/cleaning work will show little or no root growth in the sewer mains. Another indicator of success is if the sewer main does not cause an SSO in the upstream manhole due to root intrusion within the three year guarantee period.

Describe site conditions, for example consider the following: restricted access, distance from a creek or body of water, degree of runoff, site is a pesticide-free zone, etc.

The sewer mains that are selected for root foaming applications are located throughout the City. In particular, the Riviera, the Mesa, and the mid business district areas of the City are scheduled for this application. There should be no impact to any sensitive areas within the City from this product's use since the application sites are within sewer mains manholes and lower property sewer laterals.

List alternatives considered, alternatives implemented and why they were eliminated.

Other alternatives for root intrusion control in sewer mains are an increased frequency in the current method of sewer cleaning: hydro-jetting. This method is currently being done at different frequencies based on variables like pipe diameter and the presence of grease, root, or debris in the sewer main. It is a great way of reducing root mass in sewer mains. However, for small diameter pipes, roots can grow to block the pipe before the next scheduled cleaning, even if the pipe is scheduled for cleaning at a high frequency. In addition, simply hydro-jetting the sewer main does not reduce the roots growth rate. Since the majority of sewer mains in the City are 6" and 8" diameter vitrified clay pipe (VCP), the City seeks to reduce the frequency of pipe cleaning required to control root growth within sewer mains.

There are other brands of root foaming herbicides that are specifically used for sewer systems in the United States. Among them are Vaporooter and Root-X. Another company, PSM, proposed on this project with the use of Vaporooter. The City chooses to implement Razoroooter II along with Vaporooter at equal amounts for comparison purposes.

Justification: describe why is applying this pesticide is the best solution and why a less-hazardous chemical, non-chemical option or taking no action is not feasible.

There is no method to inhibit root growth and kill roots in sewer mains besides chemical root foaming.

Was outside expertise utilized? No Yes / Describe

Duke's Root Control is utilized to apply Razoroooter II. Crew members from Duke's have qualified application licenses from the Department of Pesticide Regulation Licensing/Certification Program. Duke's has been applying chemical root foam for over 30 years and has completed similar projects in cities throughout California and the United States.

Describe future plans to prevent using the chemical again.

Sewer mains treated by this chemical will be hydro-jetted (cleaned) at 12 month or less frequencies. CCTV results from crew will determine if roots in the treated sewer mains are growing at a rate too fast compared to the pipe's scheduled cleaning frequencies, and will raise the frequency or recommend another treatment of Razoroooter. The chemical will be applied only as needed in the future.

