BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

In Re Application of KLEEN ENVIRONMENTAL TECHNOLOGIES, INC.	Consolidated Docket Nos.: TG-040221 and TG-040248 PREFILED TESTIMONY OF Al Graves

I, Al Graves, declare under penalty of perjury of the laws of the state of Washington, that the following is true and correct to the best of my knowledge:

I am the Technical Services Manager of Hydroclave Systems Corp.

I have designed and installed numerous Hydroclave Units world wide. The medical waste Facility now owned by Hospital Sterilization Services' Hydroclave in Port Coquitlam, operates two Hydroclave H-100 medical waste processing systems.

I have been the Manager of Technical Services for the past eight years, and I have eight years of experience in the waste disposal industry.

We handle the following types of biomedical waste at the Port Coquitlam facility:

Regulated Medical waste

Sharps Waste

Pathological Waste

Cytotoxic Waste

A description of the Hydroclave process at the Port Coquitlam facility is found in the handouts attached hereto as Exhibits A.

ORIGINAL

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The Hydroclave technology was developed in 1995, and obtained a US patent in this unique process in 1999.

A comparison of the Hydroclave process compared to the autoclave process is found in the handout attached hereto as Exhibits B. In my capacity as the Manager of Technical Services I have become familiar with comparative processes and other medical waste treatment technologies.

The Hydroclave process guarantees sterilization to 6 Log 10 spore reduction, ensuring total kill of organisms, even heat-resistant Bacillus Stearothermophilus, the HIV and HBV viruses. The waste inside the Hydroclave is directly heated by the hot inner steel surfaces of the vessel. The Hyrodclave breaks the waste into small parts, which are vigorously tumbled against the hot steel of the vessel. This fragmented waste heats up very quickly, and evenly, often within fifteen minutes. Waste water turns to steam in the Hydroclave which in turn pressurizes the vessel. Only if there is not enough moisture in the waste to pressurize, is an outside source of steam added. The Hydroclave not only uses wastewater as a source of steam, it also returns all condensate from the jacket back to the boiler.

The Hydroclave has top loading door(s), which is complemented with a conveyor loading mechanism. The Hydroclave self-unloads the dried, fragmented waste directly into a waste bin through the bottom-unloading door.

The H-100 Hydroclave systems currently has a capacity of 6 tons per 8 hour shift.

After the Hydroclave process of 6log10 sterilization, fragmentation and dehydration, the material is further fine- shredded, then compacted and finally disposed to landfill.

The benefits of the Hydroclave process are unique and can be summarized as follows:

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1. Guaranteed sterility to 6log10 of all waste particles, even wet and liquid waste

2. Dehydration of the sterilized waste no matter how liquid or wet is was in its original form

3. Strong weight and volume reduction due to dehydration and shredding/compacting.

4. Extremely low processing cost, due to recycling of clean hot condensate via the vessel jacket.

DATED this 29th day of ~~August~~ September aac, 2004, at Kent, Washington

Al Graves

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