

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 RICHARD  
VANDERWAL

I, Richard Vanderwal, 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 President and CEO of Hydroclave Systems Corp.

I have designed and built the medical waste Facility now owned by Hospital Sterilization Services' Hydroclave in Port Coquitlam, and this Facility operates two Hydroclave H-100 medical waste processing systems.

I have President and CEO of Hydroclave Systems Corp. for ten years, and I have ten 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.

I, Richard Vanderwal, developed the unique Hydroclave process in 1995, and obtained a US patent in this unique process in 1999.

1 A comparison of the Hydroclave process compared to the autoclave process is found in  
2 the handout attached hereto as Exhibits B. As Inventor of the Hydroclave process I am  
3 intimately familiar with comparative processes and other medical waste treatment technologies.

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

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

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

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

19  
20 The benefits of the Hydroclave process is unique and can be summarized as follows:

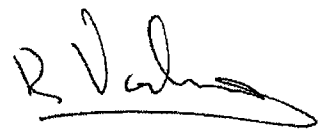
- 21 1. Guaranteed sterility to 6log10 of all waste particles, even wet and liquid waste  
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2. Dehydration of the sterilized waste no matter how liquid or wet is was in its original form

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 12th day of August, 2004, at Kingston, Ontario, Canada



Richard Vanderwal

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# HYDROCLAVE

## Biomedical Waste Treatment System

- **High level of sterilization validated by the University of Ottawa, Dept. of Immunology and Microbiology**
- **Large weight & volume reduction of the waste**
- **Total waste dehydration**
- **Low treatment cost**
- **Built to ASME Standards**

# **AN INTRODUCTION TO HYDROCLAVE WASTE TREATMENT**

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## **HYDROCLAVE**

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## 1. Introduction

The safe disposal of biomedical and other infectious/classified waste is of increasing concern with governments and the general public. At the same time, there is an increasing concern over the environmental impact of the traditional method of burning such waste.

Increasingly, across North America and beyond, methods are sought to treat and dispose of biomedical and other infectious waste without incineration. Therefore, there is a strong demand for a non-incineration method that is safe, environmentally responsible and, very importantly, cost-effective.

Several non-incineration technologies have emerged:

- **The hammer-mill method.** This method grinds the waste while still in its infectious state, and adds a chemical disinfectant. This method has not been popular due to environmental and landfill problems.
- **Micro or macrowave sterilization.** Pre-shredded waste passes through radiation, which disinfects the waste. Capital costs tend to be high, and there may be problems preparing waste in its infectious state.
- **The large-scale autoclave.** Using this steam-sterilization method is the most popular, and generally is an approved method. Drawbacks can be uneven waste heating, and a wet, odorous effluent, requiring further processing prior to being acceptable as landfill.
- **The Hydroclave.** Developed by Hydroclave Systems Inc., this method uses the well-known principle of steam sterilization, but de-hydrates and fragments the waste as well, as an integral part of the process.

Independent testing by the University of Ottawa has demonstrated the Hydroclave's ability to evenly treat all components of the waste to sterilization level 6 and higher. Furthermore, the Hydroclave produces a dry, fragmented, hydrolyzed product that can readily be put into a landfill.

## HYDROCLAVE TECHNOLOGY SUMMARY

### 2. Summary of Hydroclave waste treatment

The Hydroclave is essentially a double-walled cylindrical vessel, horizontally mounted, with one or more top loading doors, and a smaller unloading door at the bottom.

The vessel is fitted with a motor driven shaft, to which are attached powerful fragmenting/mixing arms that slowly rotate inside the vessel.

When steam is introduced in the vessel jacket, it transmits heat rapidly to the fragmented waste, which, in turn, produces steam of its own.

The resultant dynamic interaction will:

- sterilize the waste by high temperature and pressure steam, similar to an autoclave but with faster and more even heat penetration.
  - hydrolyze the organic components of the waste.
  - remove the water content (dehydrate) the waste.
  - cut the waste into small pieces of fragmented material.
  - reduce the waste substantially in volume.
  - accomplishes the above in a single cycle within the sealed vessel.
  - eliminates worker contact with infectious waste.
  - self-unloads after the treatment cycle.
  - reduces land-fill and transport costs by weight reduction.
  - the treated, reduced waste becomes acceptable for land-filling.
- 
- There is no correlation between type of load and treatment cycle. However, wet and heavy loads will take somewhat longer to reach the temperature and pressure required to initiate the treatment cycle.
  - There is no need to pull air out of the vessel, as is the case with autoclaves. Air acts as an insulator in an autoclave, and keeps the bottom part of the vessel cool. Due to the vigorous dynamic activity within the Hydroclave, any entrained air is mixed and heated with the steam and waste material.

### **3. Description of the Hydroclave Treatment Cycle**

#### **a) Loading**

The waste is loaded by dropping bagged and/or boxed waste into the open loading door(s) on the vessel.

The loading door(s) are mounted at an angle on the top side of the vessel, and can be suitably sized to accommodate the infectious wastes for which it is intended - small doors for bagged biomedical waste, to very large doors for disinfecting large animal carcasses.

No special operator skill is required, since over-loading or loading too tightly is not an issue with this type of process.

#### **b) Heat-up and fragmentation**

After loading, the vessel doors are closed, and the outer jacket of the vessel is filled with high temperature steam, which acts as the main heating medium for heating the waste.

During this heating cycle, the shaft and mixing arms rotate, causing the waste to be fragmented and continuously tumbled against the hot vessel walls.

At this point, the waste is broken up into small fragments, and all material heats up rapidly, being evenly and thoroughly exposed to the hot inner surfaces. The moisture content of the waste will turn to steam, and the vessel will start to pressurize.

Initially, no steam will be injected into the waste. If there is not enough moisture in the waste to pressurize the vessel, a small amount of steam is added until the desired pressure is reached.

At the end of this period, the correct sterilization temperature will be reached, and the sterilization period starts.

#### **c) Sterilization period**

The amount of steam fed to the outer jacket will be regulated to maintain the desired temperature/pressure of the inner vessel, and the mixing arms will continue to rotate.

The treatment time is 15 minutes at 132 C., or 30 minutes at 121 C. to achieve level 6 sterilization. (As determined by the University of Ottawa, Dept. of Microbiology)

The intense subjugation of the waste to high temperature and pressure moisture in a dynamic environment will also cause the waste to hydrolyze, that is a rapid decomposition of organic material.



### **3. Description of the Hydroclave Treatment Cycle (CONT'D)**

#### **d) De-pressurization**

After the treatment time, the steam to the jacket will remain on, and the internal vessel will be vented through a condenser, and de-pressurized. The waste loses its water content through a combination of heat input from the jacket, and flashing of water due to depressurization.

#### **e) De-hydration**

Further dehydration is achieved by maintaining heat input and mixing - almost total dryness can be achieved.

#### **f) Unloading**

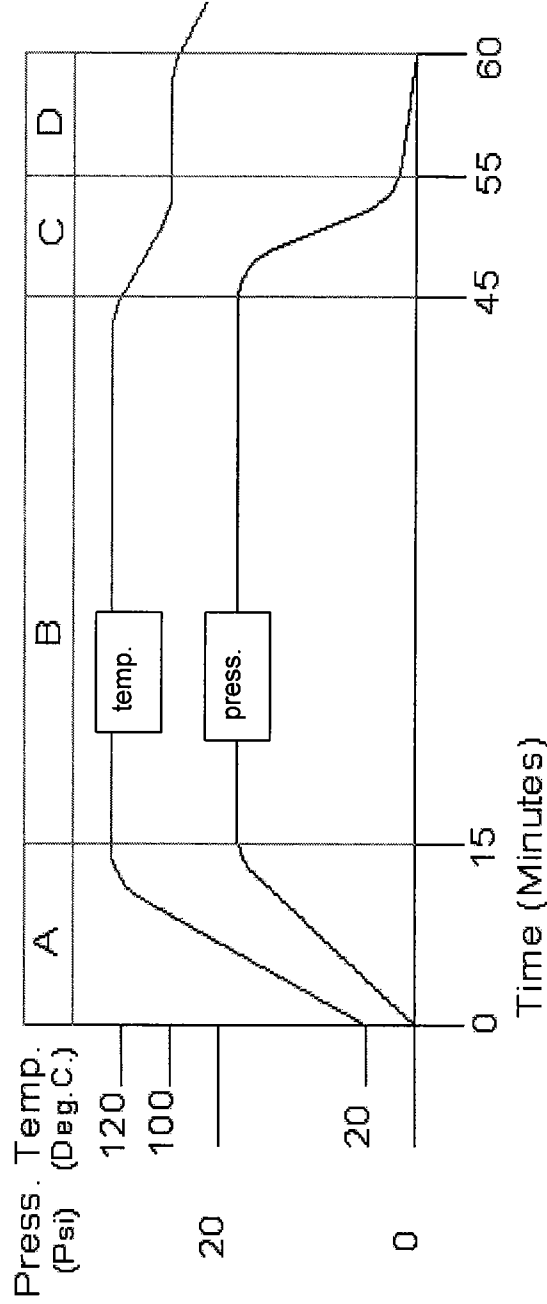
Finally, steam to the jacket is shut off, the unloading door is opened and the shaft and mixing arms are reversed to a clockwise rotation.

The mixing arms now act as an unloading mechanism, and will scoop the waste fragments out of the unloading door, onto a conveyor belt, or directly into a waste container.

The vessel is now ready for another treatment cycle, having retained most of its heat for the treatment of the next batch.



#### 4. THE FOUR STAGES OF INFECTIOUS WASTE TREATMENT BY HYDROCLAVE



- (A) Heat - up: Combined heating, mixing and fragmentation brings waste quickly to an even sterilization temperature.
- (B) Sterilization: Continued agitation at temperature 121 °C for 30 minutes sterilizes the waste.
- (C) De-pressurization: Vessel is depressurized to atmospheric pressure, all liquid are flashed off - leaving waste damp but liquid free.
- (D) De-hydration: Almost all of the remaining moisture in the waste is removed.

Note: Heat up and de-pressurization stages vary with water content of the waste.



## 5. Hydroclave Waste Treatment Costs

### HYDROCLAVE ENERGY CONSUMPTION – ACTUALS

The following information demonstrates the heat energy consumption of two H-100 Hydroclave in operation, with a steam boiler fired on natural gas.

**Actual data:**

Operating period:	three months
Medical waste processed:	522,853 lbs
Natural gas consumed:	425.7 GigaJoules of natural gas.
Natural gas heat content:	975 Btu/ cubic ft
Boiler thermal efficiency:	81%
Conversion:	One GigaJoule = 948,400 BTU's

**Therefore:**

GigaJoules per Lb of waste:  $(425.7)/(522,853) = 0.0008141$  GigaJoules/ Lb.

BTU's per Lb of waste:  $(0.0008141)(948,400) = 772.09$  BTU's

Cu.Ft. of Nat.Gas per Lb of waste:  $(772.09)/(975) = 0.792$  Cu. Ft. of Nat. gas/ Lb.

**Conclusion:**

(1) Under actual operation, including the efficiency of the steam boiler, to process every Lb of waste 0.792 Cubic Ft of Natural Gas would be consumed.

(2) Since available heat content in one Lb of steam, at 80 PSI, is about 1050 BTU's per Lb of steam, steam consumption would be  $(772.09)/(1050) = 0.735$  lbs of steam per Lb of waste processed.

If the boiler heat loss (boiler efficiency) is not taken into consideration, the final figures of (1) and (2) should be multiplied by 0.8.

## 6. Hydroclave test result for treating infectious waste

Since an essential function of the Hydroclave is the ability to destroy microorganisms, Hydroclave Systems Corp. retained the University of Ottawa, Department of Microbiology and Immunology, to test the Hydroclave for levels of microbiological kill at various time/temperature/pressures.

This Department was selected for their previous experience in testing large-scale autoclaves for the same purpose.

The following biological indicators were used:

- BIOSIGN (MSD) - mixed population of 4 log 10 *Bacillus stearothermophilus* and 6 log 10 *Bacillus subtilis* var. *niger*
- Kilit (BBL) nominal population 4.4 x 4 log 10 *B. stearothermophilus*
- Attest (3M) nominal population 4.6 x 5 log 10 *stearothermophilus*
- Sportrol (North American Science Assoc. Inc.) - nominal population 1.9 x 5 log 10 *B. stearothermophilus*
- in house BI's in polypropylene microtubes *B.stearothermophilus* - approximate populations 6 log 10, 5 log 10, 4 log 10.

The results of the tests showed that 6 log reduction was achieved under the following conditions:

- 30 minutes treatment time, at 121 degree C. and 15 PSI
- 15 minutes treatment time, at 132 degree C. and 20 PSI.

Although a 4-log reduction is acceptable for the treatment of biomedical waste, the Hydroclave will achieve 6-log reduction (sterility), which is well beyond the capability of other non-incineration treatment methods using the same treatment time!

Other interesting observations were made during the testing:

- Due to the mixing and fragmentation of the waste, waste temperature is always consistent with indicated temperature of the interior of the Hydroclave vessel. This is not usually the case with the autoclave, where it has been demonstrated that bulky, wet waste will remain significantly cooler than indicated temperature. Hence disinfection, or sterility cannot be guaranteed under those conditions.

## **7. Operational Comparison - Hydroclave and the Autoclave**

### **A. Heating medium**

The waste inside the Hydroclave is *directly* heated by the hot inner steel surfaces of the vessel. The high-pressure steam in the jacket heats the metal surfaces.

In the autoclave, the waste is heated by steam enveloping the waste. Heat from the steam must penetrate stationary, packaged or bulky waste.

### **B. Heat transfer**

The Hydroclave 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.

In the autoclave, the rate of heat penetration into the (stationary) waste depends on waste packaging, insulating factors such as entrapped air, water content, and bulk size of the waste. It was found that there is no correlation between autoclave temperature indication and actual temperature of the waste inside.

### **C. Water content**

Waste water content 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 autoclave adds steam to the waste. This steam condenses into water, which adds to the original water contents of the waste, making the waste wetter and heavier.

### **D. Steam condensate**

The Hydroclave not only uses wastewater content as a source of steam, it also returns all condensate from the jacket back to the boiler.

The autoclave cannot return any condensate. Condensed steam is contaminated and dumped to drain. Essentially, condensate created by waste heating, vessel heating and vessel heat losses are all lost.

## **7. Operational Comparison - Hydroclave and the Autoclave (CONT'D)**

### **E. Material handling**

The Hydroclave has top loading door(s), which can be complemented with a conveyor loading mechanism. Alternately, hoist loading of heavy waste and hand loading of light bagged waste is also quite easy.

The autoclave often used a cart and rail method of loading, which lends itself very well to the side door design of the autoclave.

Un-loading the waste is very different between the two. The Hydroclave self-unloads the dried, fragmented waste directly into a waste bin through the bottom-unloading door. The autoclave carts are pulled out of the vessel, often with wet and dripping waste, dried in a separate process, shredded in a separate process, and finally dumped in a waste container.

### **F. Process emissions**

Both the Hydroclave and the autoclave will emit odorous air when opened after a treatment cycle. The "Hydroclaved" waste, however, will emit substantially fewer odors than the autoclave due to the dry nature of the waste.

Usually, only a room exhaust air fan is required to dispel this air.

### **G. Maintenance**

There is no internal cleaning necessary on the Hydroclave. Any residual waste left after the automatic unloading will not hamper the next batch.

Any waste that spills into the autoclave must be removed by hand prior to the next cycle.

## **8. HYDROCLAVE AUTOMATIC OPERATING CONTROLS**

### **Safety and Operating Features**

An essential part of safe, consistent waste sterilization is the automation and safety features provided by the HYDROCLAVE control system.

#### **A. Physical Features**

The HYDROCLAVE Control system consists of a water tight, vertically mounted control panel, coupled to three steam control valves, a condenser water valve, and a thermocouple measuring inner vessel temperature.

The face of the control panel is fitted with the following features:

1. Jacket steam pressure gauge
2. Vessel steam pressure gauge
3. Power "on" light
4. Auto/manual switch
5. Manual jacket valve on/off switch
6. Manual vessel valve on/off switch
7. Manual drive activation switch with forward and reverse (unload) position
8. Automatic mode "start" pushbutton
9. Emergency "stop" pushbutton
10. Open door warning light
11. Low temperature warning light
12. Low pressure warning light
13. Honeywell two pen strip chart recorder.

The Honeywell strip chart recorder prints date and time, records vessel temperature and pressure, provides alphanumeric display of sterilization data, alarm trends in red, tagging, and zooming. Optional features such as remote monitoring and PC communication are available.

This recorder will provide a hard-copy printout of every sterilization batch, with date and time imprinted as well as the sterilization temperature and pressure.



## 8. HYDROCLAVE AUTOMATIC OPERATING CONTROLS (Page two)

### B. Sequence of Operation

- 1) The "HYDROCLAVE" is loaded with bagged waste through the loading door(s) until full and the door(s) are then closed.
- 2) With the power "on" and the **auto/man** switch in the automatic mode, the "start" button is pushed once, and the remaining operation is automatically controlled as follows:
  - The drive motor starts in the forward (mixing/fragmenting) rotation, and the jacket steam valve opens.
  - The vessel will steadily gain in temperature, and the waste is being fragmented and heated.
  - The water content of the waste will start to turn to steam and will start to pressurize the vessel.
  - Once the vessel has reached 275 degree F. the jacket steam valve will operate to maintain the above temperature in the vessel. At this time, the vessel steam valve will add steam to the vessel, if necessary, to pressurize the vessel to 40 PSI.
  - When both temperature and pressure parameters are satisfied and maintained, the sterilization timer will activate, and time these parameters for 20 minutes.
  - If, during the sterilization cycle, pressure and temperature is not maintained, the timer will reset back to zero and initiate another complete 20 minute sterilization period.
  - The depressurization cycle is now initiated, the cooling water valve of the condenser opens, the steam vent valve opens, and the motor drive is de-activated.

## **8. HYDROCLAVE AUTOMATIC OPERATING CONTROLS ( page three)**

- The vessel will steadily drop to atmospheric pressure, and the vented steam condensed and cooled to 150 degree F. and discharged to the sanitary sewer.
- Once atmospheric pressure is achieved, the dehydration timer will activate, and re-start the motor drive in the mixing mode. The continual heat from the jacket, combined with mixing action and venting will evaporate the remaining moisture off the waste. The dehydration timer can be manually adjusted to suit an unusually high or low moisture content in the waste.
- The HYDROCLAVE sterilization cycle has now ended, the vessel is at atmospheric pressure, and the un-loading door can now be manually opened.
- The motor drive is now switched manually to reverse (unloading) mode, and the sterile, dry, fragmented waste will self-unload onto a conveyor or directly into a municipal waste bin.
- With the vessel temperature still at 212 degree F., the loading door(s) can now be opened, the vessel re-loaded, and another batch cycle initiated.

# 9. HYDROCLAVE

## HYDROCLAVE STANDARD SPECIFICATIONS

### MODEL SPECIFICATIONS - IMPERIAL UNITS

Hydroclave Model	H-07	H-15	H-25	H-45	H-65	H-100	H-150	H-200	H-250
Shipping weight (lbs)	1,800	4,000	6,500	12,485	15,500	17,800	22,000	23,200	24,400
<b>Dimensions (inches)</b>									
Over-all length	72	86	100	124	141	162	195	219	248
Length of vessel	36	43	49	61	80	101	125	149	176
Diameter of vessel	36	36	46	63	60	63	70	70	70
Inner wall thickness	3/4	1	1	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4
Over-all height	72	82	96	102	105	106	112	112	112
Over-all width	55	48	60	75	72	75	81	81	81
Height to intake door (center)	42	36	44.5	71	70	71	81	81	81
Standard loading door diameter	24	36	36	24	24	24	24	24	24
Optional loading door diameter	n/a	n/a	n/a	30	30	30	30	30	30
Unloading door size	24 dia	36 dia	36 dia	11X20	11x20	11x20	11x20	11x20	11x20
Jacket steam inlet (NPT)	3/4	1	1 1/4	1 1/2	2	2	2 1/2	2 1/2	2 1/2
Vessel steam inlet (NPT)	3/4	1	1	1 1/4	1 1/2	1 1/2	2	2	2
Condensate outlet (NPT)	3/4	1	1	1 1/4	2	2	2	2	2
Vessel safety valve (NPT)	1	1 1/4	1 1/4	1 1/2	2	2	2 1/2	2 1/2	2 1/2
Jacket safety valve (NPT)	1	1 1/4	1 1/4	1 1/2	2	2	2 1/2	2 1/2	2 1/2

<b>Capacities</b>	H-07	H-15	H-25	H-45	H-65	H-100	H-150	H-200	H-250
Internal volume (cu.ft.)	9	17	29	51	110	130	192	235	280
Loading volume (cu.ft.)	8	15	25	45	65	100	150	200	250
Maximum batch weight (lbs) @ 10 lbs/ft <sup>3</sup> waste density	80	150	250	450	650	1000	1500	2000	2500
Processing capacity in lbs/hr (10 lbs/ft <sup>3</sup> - including loading & unloading)	66	120	200	350	500	750	1000	1500	2000
Drive motor (460/3/60), HP	2	5	7.5	15	20	25	30	40	40
Full load Amps at 460V		7	11	20	26	32	39	51	51
Average electrical consumption per 1 hr batch (kW)	9	1	1.65	3	4	5	6	8	8
Minimum steam pressure (Psi)	40	40	40	43	40	60	60	60	60
Maximum steam flow (lbs/hr)		309	500	1000	1500	2000	3000	4000	5000
Steam per batch (lbs)		121	200	500	700	1000	1800	2200	2500
Maximum condenser water flow (US gal/min)		2.5	5	7	10	20	30	35	40
Water consumption per batch cycle (US gals)	12	26	45	78	117	180	270	360	450

Note: The above capacity figures are based on average conditions using waste with 40-50% water content, and 10-20% cloth content. Actual operating conditions may vary.

## **10. HYDROCLAVE PRICING SPECIFICATIONS**

### **INCLUDED IN SYSTEM PRICE**

1. One Hydroclave waste processing vessel c/w gear drive, motor, and manual loading and unloading doors
2. One condensing system with operating controls
3. One control panel to provide fully automatic operation of the system and to provide all safety interlocks as per standard specifications
4. Three days commissioning and one day operational training
5. Standard Hydroclave warranty after commissioning by factory representative
6. Standard product, engineering and installation drawings

### **NOT INCLUDED IN SYSTEM PRICE**

1. INSTALLATION
2. LOCAL APPLICATION APPROVALS
3. TRAVEL EXPENSES INCURRED FOR COMMISSIONING AND TRAINING
4. SHIPPING COSTS
5. ANY APPLICABLE TAXES, DUTIES OR TARRIFFS

**Hydroclave Systems Corp. can provide site-specific application engineering to the agent or buyer at additional costs.**

# Steam Treatment Comparisons

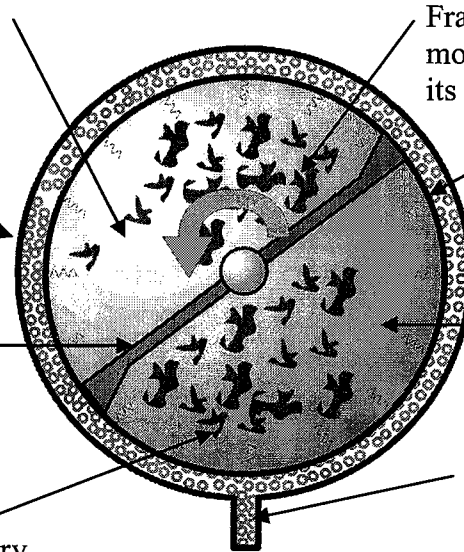
## HYDROCLAVE

A mixture of steam (made from moisture in the waste) and air move continuously throughout the waste, and the entire vessel. No steam condenses to form "rain" due to the hot walls of the vessel.

Double-wall (jacketed) shell filled with hot, high-pressure steam.

A powerful mixing/fragmenting arm breaks up the waste, keeping waste in motion and distributes the heat evenly into all waste particles.

Treated waste fragments are very dry and are lighter than the original waste, and is easily post-shredded.



Fragmented waste particles in motion are easily heated and turn its water content into steam.

Hot, clean steam radiates its heat to the interior of the vessel.

Heat conducts into the waste and radiates into the vessel.

Only hot, CLEAN condensate is removed during the entire process, and recycled back to the boiler, making the Hydroclave very economical to operate. NOTHING can escape the vessel.

## AUTOCLAVE

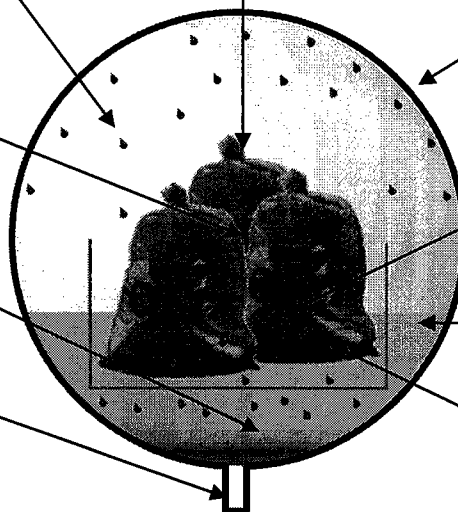
Steam enters the top of the vessel, initially turns to condensate (rain) until the vessel is hot. The steam then compresses the air inside to the bottom of the vessel.

Tight spacing of bags prevents heat from penetrating the waste inside.

Hot, infectious condensate collects at the bottom of vessel.

The infectious air, and infectious condensate **MUST** be removed **BEFORE** the start of the sterilization cycle.

Special high temperature waste bags must be used so they remain intact when expose to heat.



Single-wall shell is heated by interior steam and causes "rain" to fall inside, over the bags, and collects at the bottom.

The interior of heavy, wet bags may not get heat penetration.

The compressed layer of air acts as an insulator.

Treated bags of waste become heavier with water, hardened and shrunk with heat.

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"HYDROCLAVE" is a trademark of HYDROCLAVE Systems Corp.



## Operational Comparison: HYDROCLAVE and the Autoclave

### A. Heating Medium

The waste inside the HYDROCLAVE is *directly* heated by the hot inner steel surfaces of the vessel. The high-pressure steam in the jacket heats the metal surfaces.

In the autoclave, the waste is heated by steam enveloping the waste. Heat from the steam must penetrate stationary, packaged, or bulky waste.

### B. Heat Transfer

The HYDROCLAVE 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.

In the autoclave, the rate of heat penetration into the (stationary) waste depends on waste packaging, insulating factors such as entrapped air, water content, and bulk size of the waste. It was found that there is no correlation between autoclave temperature indication and actual temperature of the waste inside.

### C. Water Content

Wastewater content 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 autoclave adds steam to the waste. This steam condenses into water, which adds to the original water contents of the waste, making the waste wetter and heavier.

### D. Steam Condensate

The HYDROCLAVE not only uses wastewater content as a source of steam, it also returns all condensate from the jacket back to the boiler.

The autoclave cannot return any condensate. Condensed steam is contaminated and dumped to drain. Essentially, condensate created by waste heating, vessel heating and vessel heat losses are all lost.



## **E. Material Handling**

The HYDROCLAVE has top loading door(s), which can be complemented with a conveyor loading mechanism. Alternately, hoist loading of heavy waste and hand loading of light bagged waste is also quite easy.

The autoclave often used a cart and rail method of loading, which lends itself very well to the side door design of the autoclave.

Un-loading the waste is very different between the two:

The HYDROCLAVE self-unloads the dried, fragmented waste directly into a waste bin through the bottom-unloading door. The autoclave carts are pulled out of the vessel, often with wet and dripping waste, dried in a separate process, shredded in a separate process, and finally dumped in a waste container.

## **F. Process Emissions**

Both the HYDROCLAVE and the autoclave will emit odorous air when opened after a treatment cycle. The “HYDROCLAVED” waste, however, will emit substantially fewer odors than the autoclave due to the dry nature of the waste. Usually, only a room exhaust air fan is required to dispel this air.

## **G. Maintenance**

There is no internal cleaning necessary on the HYDROCLAVE. Any residual waste left after the automatic unloading will not hamper the next batch. Any waste that spills into the autoclave must be removed by hand before the next cycle.

**EXHIBIT KRL-IT**

**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 KENNETH  
LEE**

I, Kenneth Lee, 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:

**WITNESS**

I am the Chief Financial Officer, Secretary, Registered Agent and a shareholder of Kleen Environmental Technologies, Inc. As Chief Financial Officer, my duties include financial management of the company. I have been with Kleen for 12 years and have held the positions of Chief Financial Officer and Secretary for all those years.

**FINANCIAL RECORDS**

Attached hereto are true and correct copies of the following financial records of Kleen, generated by me from existing company records and projections:

1. Financial Statements dated September 30, 2003.
2. Letter to Robert L. Olson regarding funding of the proposed Bio-Hazardous (biomedical) waste program.



1 3. A Capitalization Inventory List for the Bio-Hazardous (biomedical) waste  
2 program.

3 4. Pro-forma financials for the proposed Bio-Hazardous (biomedical) waste  
4 program, including assumption.

5 5. Proposed tariff for the proposed Bio-Hazardous (biomedical) waste program.

6 The pro-forma and tariff figures were calculated using transportation costs based on the  
7 hourly cost of the truck and driver, disposal costs of \$200 per ton, insurance costs based on a  
8 quote from our current insurer (Continental) and sharing the cost of our current building  
9 insurance, and container costs of \$1.60 per unit from All-Pak Containers.

10 Our various financial spreadsheets show a loss for a period of time in the various regions  
11 until we reach a level of clients and quantity that allow us to turn a profit. We have not adjusted  
12 pricing to offset these differences in routes. We simply increase the "dead time" meaning time  
13 that a truck and driver drive to pick-up waste.

14 DATED this 6<sup>th</sup> day of August, 2004, at Bellevue, WA.

15   
16 Kenneth Lee

17  
18  
19  
20  
21  
22

EXHIBIT KRL-2

KLEEN ENVIRONMENTAL TECHNOLOGIES, INC.

FINANCIAL STATEMENTS

September 30, 2003

KLEEN ENVIRONMENTAL TECHNOLOGIES, INC.

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September 30, 2003

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## ERNEST JONSON & COMPANY, P.S.

---

Certified Public Accountants

To the stockholders of  
Kleen Environmental Technologies, Inc.  
Bellavue, Washington

We have reviewed the accompanying balance sheet of Kleen Environmental Technologies, Inc., as of September 30, 2003, and the related statements of income and retained earnings and cash flows for the year then ended, in accordance with the Statements on Standards for Accounting and Review Services issued by the American Institute of Certified Public Accountants. All information included in these financial statements is the representation of the management of Kleen Environmental Technologies, Inc.

A review consists principally of inquiries of Company personnel and analytical procedures applied to financial data. It is substantially less in scope than an audit in accordance with generally accepted auditing standards, the objective of which is the expression of an opinion regarding the financial statements taken as a whole. Accordingly, we do not express such an opinion.

Based on our review, we are not aware of any material modifications that should be made to the accompanying financial statements in order for them to be in conformity with generally accepted accounting principles. Our review was made for the purpose of expressing limited assurance that there are no material modifications that should be made to the financial statements in order for them to be in conformity with generally accepted accounting principles.

Respectfully submitted,

*Ernest Jonson & Company P.S.*  
Certified Public Accountants

November 12, 2003

KLEEN ENVIRONMENTAL TECHNOLOGIES, INC.

BALANCE SHEET

September 30, 2003

ASSETS

CURRENT ASSETS

Cash and cash equivalents	\$136,872
Accounts receivable	<u>210,082</u>
TOTAL CURRENT ASSETS	346,954

PROPERTY AND EQUIPMENT

Trucks and equipment	87,168
Office equipment	<u>3,600</u>
	90,768
Less accumulated depreciation	<u>57,429</u>
NET PROPERTY AND EQUIPMENT	33,339

OTHER ASSETS

Deposits	<u>1,500</u>
----------	--------------

TOTAL ASSETS \$381,793

LIABILITIES AND STOCKHOLDERS' EQUITY

CURRENT LIABILITIES

Accounts payable	\$ 41,908
State taxes payable	6,564
Deposits	1,565
Federal income tax payable	6,912
Deferred income tax	<u>25,500</u>
TOTAL CURRENT LIABILITIES	82,449

STOCKHOLDERS' EQUITY

Capital stock	2,000
Retained earnings	<u>297,344</u>
TOTAL STOCKHOLDERS' EQUITY	<u>299,344</u>

TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY \$381,793

See accountants' review report. The accompanying notes are an integral part of these financial statements.

KLEEN ENVIRONMENTAL TECHNOLOGIES, INC.  
STATEMENT OF INCOME AND RETAINED EARNINGS  
For the year ended September 30, 2003

<u>SALES</u>	\$ 937,870
<u>DIRECT EXPENSE</u>	
Salaries and wages	333,541
Payroll taxes	26,071
Employee benefits	26,919
Supplies	174,887
Lab and disposal fees	201,293
outside labor fees	2,017
TOTAL DIRECT EXPENSE	<u>764,728</u>
GROSS PROFIT ON SALES	173,142
<u>GENERAL AND ADMINISTRATIVE EXPENSE</u>	
Salaries and wages	54,358
Payroll taxes	4,809
Employee benefits	321
Transportation	7,040
Insurance	17,772
Legal	5,916
Rent	31,647
Office supplies	7,661
Telephone	10,728
State taxes	5,820
Utilities	2,070
Other	4,064
TOTAL GENERAL AND ADMINISTRATIVE EXPENSE	<u>152,206</u>
OPERATING PROFIT	20,936
<u>OTHER (EXPENSE)</u>	
Depreciation	( 7,555)
TOTAL OTHER (EXPENSE)	<u>( 7,555)</u>
<u>NET INCOME BEFORE PROVISION FOR INCOME TAX</u>	
Provision for income tax	( 6,912)
Provision for deferred income tax	<u>4,500</u>
NET INCOME	<u>10,969</u>
<u>RETAINED EARNINGS, beginning balance</u>	<u>286,374</u>
RETAINED EARNINGS, ENDING BALANCE	<u>\$ 297,343</u>

See accountants' review report. The accompanying notes are an integral part of these financial statements.

KLEEN ENVIRONMENTAL TECHNOLOGIES, INC.

STATEMENT OF CASH FLOWS

For the year ended September 30, 2003

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<u>CASH FLOWS FROM OPERATING ACTIVITIES</u>	
Cash received from customers	\$ 981,767
Cash paid for employees and expenses	(927,871)
Federal income tax paid	( 587)
NET CASH PROVIDED BY OPERATING ACTIVITIES	53,309
NET INCREASE IN CASH	53,309
<u>CASH AND CASH EQUIVALENTS, BEGINNING OF YEAR</u>	<u>83,563</u>
CASH AND CASH EQUIVALENTS, END OF YEAR	<u>\$ 136,872</u>

RECONCILIATION OF NET INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES

<u>NET INCOME</u>	\$ 10,969
<u>ADJUSTMENTS TO RECONCILE NET INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES</u>	
Depreciation	7,555
Gain on sale of assets	
Changes in assets and liabilities:	
Decrease in accounts receivable	43,897
(Decrease) in accounts payable	( 16,450)
Increase in State taxes payable	5,513
Increase in federal income tax payable	6,325
(Decrease) in deferred income tax	( 4,500)
TOTAL ADJUSTMENTS	<u>42,340</u>
NET CASH PROVIDED BY OPERATING ACTIVITIES	<u>\$ 53,309</u>

See accountants' review report. The accompanying notes are an integral part of these financial statements.

KLEEN ENVIRONMENTAL TECHNOLOGIES, INC.

NOTES TO FINANCIAL STATEMENTS

For the year ended September 30, 2003

NOTE 1 - BUSINESS ACTIVITY AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Business activity

Kleen Environmental Technologies, Inc., is a Washington corporation primarily involved in environmental services which consist of consulting, facility decontamination and hazardous waste management.

Cash and cash equivalents

The Company considers all certificates of deposit purchased with a maturity of three months or less to be cash equivalents.

Accounts receivable

The Company has elected to record bad debts as they become uncollectible rather than providing a reserve amount for estimated bad debt. This departure from generally accepted accounting principles did not have a material effect on the Company's financial position or the results of operations.

Property and equipment

Property and equipment are stated at cost and depreciated over the estimated useful lives of five to seven years, using the straight-line and accelerated methods.

Income taxes

The provision for income taxes is based on income recognized for financial statement purposes and includes the effects of temporary differences between such income and that recognized for tax return purposes. Statement of Financial Accounting Standards (SFAS) No. 109, "Accounting for Income Taxes," effective January 1, 1993, did not have a material effect on the Company's financial position or the results of operations.

Revenue recognition

Sales and the related direct expense are generally recognized on a monthly basis at the time of invoicing. The Company has determined work in progress and the associated cost is not material.

NOTE 2 - USE OF ESTIMATES

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the period. Actual results could differ from those estimates.



KLEEN ENVIRONMENTAL TECHNOLOGIES, INC.

NOTES TO FINANCIAL STATEMENTS (continued)

For the year ended September 30, 2003

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NOTE 3 - CONCENTRATION OF CREDIT RISK

The Company maintains its checking accounts at one commercial bank. At times the cash balances in these accounts exceed the amount secured by the FDIC. The Company grants credit to customers on an unsecured basis, substantially all of whom are located in Washington, Oregon and Alaska.

NOTE 4 - LEASES

Lease commitments for office and manufacturing space expired May 31, 2001. The Company is renegotiating its lease agreement and is presently on a month-to-month rental agreement at \$2,461 per month. Rent expense for 2003 was \$31,647.

NOTE 5 - EMPLOYEE BENEFIT PLANS

The Company maintains a simple individual retirement account (IRA) for eligible employees. Participation in the plan is based on age and service.

The plan qualifies under Section 408(p) of the Internal Revenue Code. The plan allows employees to contribute up to \$6,000 of their compensation on a tax-deferred basis. The Company matches the employee's contribution up to 3% of the employee's compensation.

EXHIBIT KRL-3

APRIL 19, 2004

ROBERT L. OLSON, PRESIDENT  
KLEEN ENVIRONMENTAL TECHNOLOGIES, INC.  
754 GARFIELD ST.  
SEATTLE, WA. 98109

Re: Bio-hazardous Waste Capitalization Funding

Per your request, I have reviewed the list of items (attached) deemed necessary to operate the Bio-Hazardous waste program. You have requested that I determine funding sources for these items.

Rolling Stock

The three vehicles: 24' van with lift-gate, 20' van with lift-gate, and the 20' van without lift-gate, at \$139,445 estimated cost, can be obtained through leasing with minimal money down from Harris Ford in Lynnwood, Wa.

Equipment

The balance of the equipment including Bar Code System, Computer, and Casting Tools, at \$23,500 can be funded from working capital.

Supplies

The supplies, at \$15,525, can be funded from working capital.

Personnel Related Items

The remaining items including personnel training, physicals, G&A wages, at \$5,500 can be funded from working capital.

The last item, building modifications, at \$15,000, can usually be funded by our landlord by extending our building lease in duration and monthly rate.

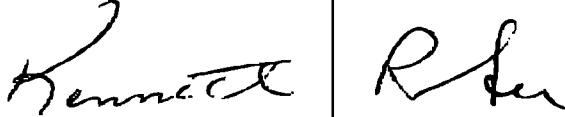
Summary

In summary, rolling stock of \$139,445 can be funded by leases, equipment and other expenses of \$44,525 can be funded from working capital, and building modification of \$15,000 by our landlord.

As you are aware, our minimum working capital (cash in the bank) for the past 6 months has averaged over \$100,000 as per our bank. In the event additional funds are needed, the three partners have agreed to contribute the necessary additional monies in equal amounts to meet the need. A final source could be obtained from our bank as a line of credit. As you may recall, KET had a \$100,000 line of credit for many years, but never had a need to call upon it, so it was dropped 2 years ago.

If you have any other issues, lets discuss them.

Sincerely Yours



Kenneth R. Lee, C.F.O.  
Kleen Environmental Technologies, Inc

EXHIBIT KRL-4

KLEEN ENVIRONMENTAL TECH, INC.

BioHazardous Waste Capitalization Inventory List

Date: 06-March-2004

DESCRIPTION	QUANTITY	PURCHASE FROM	VALUE
Bar Code Electronic Tracking System	1	Aurora Bar Code	\$18,500.00
Computer System to Support ETS	1	Gateway	\$3,500.00
Casting Tool for Storage Tubs	1	Go-To-Plastics	\$1,500.00
Storage Tubs	300	Go-To-Plastics	\$10,200.00
Corrugated Boxes	2,500	AP-Pak	\$3,500.00
Labels	3,500	Associated Labels	\$850.00
Truck 24' w/lift gate	1	Fleet Dealership	\$54,751.00
Truck 20' Van	1	Fleet Dealership	\$41,547.00
Truck 20' Van w/lift gate	1	Fleet Dealership	\$43,147.00
Biohazardous Red Bag Liners	2,500	Associated Bags	\$645.45
Personnel Training	3	Argus	\$1,500.00
Physicals	3	Undecided	\$1,000.00
P.E./Uniforms	-----	Undecided	\$300.00
Wages/G&A	-----	N/A	\$3,000.00
Building Modifications (cooling unit)	1	Undecided	\$15,000.00
		TOTAL:	\$198,970.00

**EXHIBIT KRL-5**

KLEEN ENVIRONMENTAL TECHNOLOGIES, INC.		BIOHAZARD WASTE DISPOSAL DIVISION PROFORMA PROFIT & LOSS ANALYSIS												
REGION 1		Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Year
No. of Clients Obtained		4	8	10	16	20	21	21	22	22	23	23	24	24
Units for Disposal @ # Clients X 15pu/wk		240	480	600	960	1200	1230	1261	1292	1325	1358	1392	1426	12763
Sales @ \$18.44/unit X # Units for Disp		4425.60	8851.20	11064.00	17702.40	22128.00	22681.20	\$23,248.23	\$23,829.44	\$24,425.17	\$25,035.80	\$25,661.70	\$26,303.24	\$235,355.97
Direct Cost of Sales:														
Labor Hours 1 emp up to 1000 units		160	160	160	160	160	160	160	160	160	160	160	160	1920
Labor Wages		3200.00	3200.00	3200.00	3200.00	3200.00	3200.00	3200.00	3200.00	3200.00	3200.00	3200.00	3200.00	38400.00
Payroll Taxes		307.20	307.20	307.20	307.20	307.20	307.20	307.20	307.20	307.20	307.20	307.20	307.20	3686.40
Workers Comp		328.00	328.00	328.00	328.00	328.00	328.00	328.00	328.00	328.00	328.00	328.00	328.00	3936.00
Empl Health Insur		193.60	193.60	193.60	193.60	193.60	193.60	193.60	193.60	193.60	193.60	193.60	193.60	2323.20
Material: Boxes @ \$1.40/box		336.00	672.00	840.00	1344.00	1680.00	1722.00	1765.05	1809.18	1854.41	1900.77	1948.28	1996.99	17868.67
Material Labels @ \$.36/box		86.40	172.80	216.00	345.60	432.00	442.80	453.87	465.22	476.85	488.77	500.99	513.51	4594.80
Disposal @ \$4.00/box		960.00	1920.00	2400.00	3840.00	4800.00	4920.00	5043.00	5169.08	5298.30	5430.76	5566.53	5705.69	51053.36
Disposal Admin @ \$.20/box		480.00	960.00	1200.00	1920.00	2400.00	2460.00	2521.50	2584.54	2649.15	2715.38	2783.26	2852.85	25526.68
Other														
Subtotal Direct Expenses		5891.20	7753.60	8684.80	11478.40	13340.80	13573.60	13812.22	14056.81	14307.51	14564.47	14827.87	15097.84	147389.11
Gross Profit		-1465.60	1097.60	2379.20	6224.00	8787.20	9107.60	9,436.01	9,772.63	10,117.67	10,471.33	10,833.83	11,205.40	87966.86
Gross Profit %		-0.33	0.12	0.22	0.35	0.40	0.40	40.6%	41.0%	41.4%	41.8%	42.2%	42.6%	37.4%
Indirect Cost of Sales:														
Miles/month		2800.00	3200.00	3400.00	4000.00	4400.00	4450.00	4561	4675	4792	4912	5035	5161	51386.06
Vehicle Lease @ \$1000/vehicle/month		1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	12000.00
Vehicle Operating @ .22/mile		616.00	704.00	748.00	880.00	968.00	979.00	1003.48	1028.56	1054.28	1080.63	1107.65	1135.34	11304.93
(above includes: gas oil, maint, & insurance)														
Empl Training		1500.00												
Subtotal Indirect Expenses		3116.00	1704.00	1748.00	1880.00	1968.00	1979.00	2003.48	2028.56	2054.28	2080.63	2107.65	2135.34	24804.93
Admin Expenses:														
Admin Hours		20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	240.00
Wages		600.00	600.00	600.00	600.00	600.00	600.00	600.00	600.00	600.00	600.00	600.00	600.00	7200.00
Payroll Taxes		57.60	57.60	57.60	57.60	57.60	57.60	57.60	57.60	57.60	57.60	57.60	57.60	691.20
Admin Workers Comp		1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	21.60
Commissions														
Subtotal Admin Expenses		679.40	679.40	679.40	679.40	679.40	679.40	679.40	679.40	679.40	679.40	679.40	679.40	8152.80
Marginal Indirect Expenses:														
Advertising														



REGION 2		KLEEN ENVIRONMENTAL TECHNOLOGIES, INC. BIOHAZARD WASTE DISPOSAL DIVISION PROFORMA PROFIT & LOSS ANALYSIS												Year
		Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	1
No. of Clients Obtained		2	2	4	4	4	4	4	6	6	6	6	6	7
Units for Disposal @ # Clients X 15pu/wk		120	123	240	246	252	258	265	360	369	378	388	397	397
Sales @ \$18.44/unit X # Units for Disp		2212.80	2268.12	4425.60	4536.24	4649.65	4765.89	\$4,885.03	\$6,638.40	\$6,804.36	\$6,974.47	\$7,148.83	\$7,327.55	\$62,636.94
Direct Cost of Sales:														
Labor Hours 1/2 emp up to 500 units		80	80	80	80	80	80	80	80	80	80	80	80	960
Labor Wages		1600.00	1600.00	1600.00	1600.00	1600.00	1600.00	1600.00	1600.00	1600.00	1600.00	1600.00	1600.00	19200.00
Payroll Taxes		153.60	153.60	153.60	153.60	153.60	153.60	153.60	153.60	153.60	153.60	153.60	153.60	1843.20
Workers Comp		164.00	164.00	164.00	164.00	164.00	164.00	164.00	164.00	164.00	164.00	164.00	164.00	1968.00
Empl Health Insur		96.80	96.80	96.80	96.80	96.80	96.80	96.80	96.80	96.80	96.80	96.80	96.80	1161.60
Material: Boxes @ \$1.40/box		168.00	172.20	336.00	344.40	353.01	361.84	370.88	504.00	516.60	529.52	542.75	556.32	4755.52
Material Labels @ \$.56/box		43.20	44.28	86.40	88.56	90.77	93.04	95.37	129.60	132.84	136.16	139.57	143.05	1222.85
Disposal @ \$4.00/box		480.00	492.00	960.00	984.00	1008.60	1033.82	1059.66	1440.00	1476.00	1512.90	1550.72	1589.49	13587.19
Disposal Admin @ \$2.00/box		240.00	246.00	480.00	492.00	504.30	516.91	529.83	720.00	738.00	756.45	775.36	794.75	6793.59
Other														
Subtotal Direct Expenses		2945.60	2968.88	3876.80	3923.36	3971.08	4020.00	4070.14	4808.00	4877.84	4949.43	5022.80	5098.01	50531.95
Gross Profit		-732.80	-700.76	548.80	612.88	678.56	745.89	814.89	1,830.40	1,926.52	2,025.04	2,126.03	2,229.54	12104.99
Gross Profit %		-0.33	-0.31	0.12	0.14	0.15	0.16	16.7%	27.6%	28.3%	29.0%	29.7%	30.4%	19.3%
Indirect Cost of Sales:														
Miles/month		200.00	205.00	400.00	410.00	420.25	430.76	441.53	600.00	615.00	630.38	646.13	662.29	5661.33
Vehicle Lease @ \$1000/1/4 vehic/month		250.00	250.00	250.00	250.00	250.00	250.00	250.00	250.00	250.00	250.00	250.00	250.00	3000.00
Vehicle Operating @ .22/mile		44.00	45.10	88.00	90.20	92.46	94.77	97.14	132.00	135.30	138.68	142.15	145.70	1245.49
(above includes: gas,oil,maint, & insurance)														
Empl Training		400.00												
Subtotal Indirect Expenses		694.00	295.10	338.00	340.20	342.46	344.77	347.14	382.00	385.30	388.68	392.15	395.70	4645.49
Admin Expenses:														
Admin Hours		5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	60.00
Wages		150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	1800.00
Payroll Taxes		14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	172.80
Admin Workers Comp		0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	5.40
Commissions														
Subtotal Admin Expenses		169.85	169.85	169.85	169.85	169.85	169.85	169.85	169.85	169.85	169.85	169.85	169.85	2038.20
Marginal Indirect Expenses:														
Advertising														

Liability Insur @ \$1.20/\$1000/mo	2.66	2.72	5.31	5.44	5.58	5.72	5.86	7.97	8.17	8.37	8.58	8.79	75.16
Licensing	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	100.00
Postage @ \$.37/Piece	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	88.80
Printing	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	60.00
Taxes (B&O) @ Rev X .00484	10.71	10.98	21.42	21.96	22.50	23.07	23.64	32.13	32.93	33.76	34.60	35.47	303.16
Misc													
Subtotal	34.10	34.43	47.46	48.13	48.82	49.52	50.24	60.83	61.83	62.86	63.91	64.99	627.13
Net Profit Def Depr & Amort	-1630.75	-1200.14	-6.51	54.70	117.44	181.75	247.67	1,217.72	1,309.54	1,403.65	1,500.12	1,598.99	4794.17



REGION 3	KLEEN ENVIRONMENTAL TECHNOLOGIES, INC.												Year	
	BIOHAZARD WASTE DISPOSAL DIVISION PROFORMA PROFIT & LOSS ANALYSIS													
	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec		
No. of Clients Obtained	1	1	2	2	2	2	2	2	3	3	3	3	4	4
Units for Disposal @ # Clients X 15pu/wk	60	62	120	123	126	129	132	180	185	189	194	240	1740	
Sales @ \$18.44/unit X # Units for Disp	1106.40	1134.06	2212.80	2268.12	2324.82	2362.94	\$2,442.52	\$3,319.20	\$3,402.18	\$3,487.23	\$3,574.42	\$4,425.60	\$32,080.29	
Direct Cost of Sales:														
Labor Hours 1/4 emp up to 500 units	40	40	40	40	40	40	40	40	40	40	40	40	480	
Labor Wages	800.00	800.00	800.00	800.00	800.00	800.00	800.00	800.00	800.00	800.00	800.00	800.00	9600.00	
Payroll Taxes	76.80	76.80	76.80	76.80	76.80	76.80	76.80	76.80	76.80	76.80	76.80	76.80	921.60	
Workers Comp	82.00	82.00	82.00	82.00	82.00	82.00	82.00	82.00	82.00	82.00	82.00	82.00	984.00	
Empl Health Insur	48.40	48.40	48.40	48.40	48.40	48.40	48.40	48.40	48.40	48.40	48.40	48.40	580.80	
Material: Boxes @ \$1.40/box	84.00	86.10	168.00	172.20	176.51	180.92	185.44	252.00	258.30	264.76	271.38	336.00	2435.60	
Material Labels @ \$.56/box	21.60	22.14	43.20	44.28	45.39	46.52	47.68	64.80	66.42	68.08	69.78	86.40	626.30	
Disposal @ \$4.00/box	240.00	246.00	480.00	492.00	504.30	516.91	529.83	720.00	738.00	756.45	775.36	960.00	6958.85	
Disposal Admin @ \$2.00/box	120.00	123.00	240.00	246.00	252.15	258.45	264.92	360.00	369.00	378.23	387.68	480.00	3479.42	
Other														
Subtotal Direct Expenses	1472.80	1484.44	1938.40	1961.68	1985.54	2010.00	2035.07	2404.00	2438.92	2474.71	2511.40	2869.60	25586.57	
Gross Profit	-366.40	-350.38	274.40	306.44	339.28	372.94	407.45	915.20	963.26	1,012.52	1,063.01	1,556.00	6493.73	
Gross Profit %	-0.33	-0.31	0.12	0.14	0.15	0.16	16.7%	27.6%	28.3%	29.0%	29.7%	35.2%	20.2%	
Indirect Cost of Sales:														
Miles/month	400.00	410.00	600.00	615.00	630.38	646.13	662.29	750.00	768.75	787.97	807.67	1000.00	8078.18	
Vehicle Lease @ \$1000/ 1/4 vehic/month	250.00	250.00	250.00	250.00	250.00	250.00	250.00	250.00	250.00	250.00	250.00	250.00	3000.00	
Vehicle Operating @ .22/mile	88.00	90.20	132.00	135.30	138.68	142.15	145.70	165.00	169.13	173.35	177.69	220.00	1777.20	
(above includes: gas,oil,maint. & insurance)														
Empl Training	400.00													
Subtotal Indirect Expenses	738.00	340.20	382.00	385.30	388.68	392.15	395.70	415.00	419.13	423.35	427.69	470.00	5177.20	
Admin Expenses:														
Admin Hours	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	60.00	
Wages	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	1800.00	
Payroll Taxes	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	172.80	
Admin Workers Comp	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	5.40	
Commissions														
Subtotal Admin Expenses	169.85	169.85	169.85	169.85	169.85	169.85	169.85	169.85	169.85	169.85	169.85	169.85	2038.20	
Marginal Indirect Expenses:														
Advertising														

Liability Insur @ \$1.20/\$1000/mo	1.33	1.36	2.66	2.72	2.79	2.86	2.93	3.98	4.08	4.18	4.29	5.31	38.50
Licensing	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	100.00
Postage @ \$37/Piece	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	88.80
Printing	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	60.00
Taxes (B&O) @ Rev X .00484	5.35	5.49	10.71	10.98	11.25	11.53	11.82	16.06	16.47	16.88	17.30	21.42	155.27
Misc													
Subtotal	27.42	27.58	34.10	34.43	34.78	35.13	35.49	40.78	41.28	41.80	42.32	47.46	442.56
Net Profit bef Depr & Amort	-1301.67	-888.01	-311.55	-283.14	-254.03	-224.18	-193.59	289.57	333.00	377.52	423.15	868.69	-1164.24

REGION 4		KLEEN ENVIRONMENTAL TECHNOLOGIES, INC. BIOHAZARD WASTE DISPOSAL DIVISION PROFORMA PROFIT & LOSS ANALYSIS												Year
		Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	
No. of Clients Obtained		2	2	4	4	4	5	5	6	6	7	7	8	8
Units for Disposal @ # Clients X 15pu/wk		120	123	240	246	252	300	308	360	369	420	431	480	3648
Sales @ \$18.44/unit X # Units for Disp		2212.80	2268.12	4425.60	4536.24	4649.65	5532.00	\$5,670.30	\$6,538.40	\$6,804.36	\$7,744.80	\$7,938.42	\$8,851.20	\$67,271.89
Direct Cost of Sales:														
Labor Hours 1/2 emp up to 500 units		80	80	80	80	80	80	80	80	80	80	80	80	960
Labor Wages		1600.00	1600.00	1600.00	1600.00	1600.00	1600.00	1600.00	1600.00	1600.00	1600.00	1600.00	1600.00	19200.00
Payroll Taxes		153.60	153.60	153.60	153.60	153.60	153.60	153.60	153.60	153.60	153.60	153.60	153.60	1843.20
Workers Comp		164.00	164.00	164.00	164.00	164.00	164.00	164.00	164.00	164.00	164.00	164.00	164.00	1968.00
Empl Health Insur		96.80	96.80	96.80	96.80	96.80	96.80	96.80	96.80	96.80	96.80	96.80	96.80	1161.60
Material: Boxes @ \$1.40/box		168.00	172.20	336.00	344.40	353.01	420.00	430.50	504.00	516.60	588.00	602.70	672.00	5107.41
Material Labels @ \$.36/box		43.20	44.28	86.40	88.56	90.77	108.00	110.70	129.60	132.84	151.20	154.98	172.80	1313.33
Disposal @ \$4.00/box		480.00	492.00	960.00	984.00	1008.60	1200.00	1230.00	1440.00	1476.00	1680.00	1722.00	1920.00	14592.60
Disposal Admin @ \$2.00/box		240.00	246.00	480.00	492.00	504.30	600.00	615.00	720.00	738.00	840.00	861.00	960.00	7296.30
Other														
Subtotal Direct Expenses		2945.60	2968.88	3876.80	3923.36	3971.08	4342.40	4400.60	4808.00	4877.84	5273.60	5355.08	5739.20	52482.44
Gross Profit		-732.80	-700.76	548.80	612.88	678.56	1189.60	1,269.70	1,830.40	1,926.52	2,471.20	2,583.34	3,112.00	14789.44
Gross Profit %		-0.33	-0.31	0.12	0.14	0.15	0.22	22.4%	27.6%	28.3%	31.9%	32.5%	35.2%	22.0%
Indirect Cost of Sales:														
Miles/month		600.00	605.00	800.00	810.00	820.25	900.00	912.50	1000.00	1015.00	1100.00	1117.50	1200.00	10880.25
Vehicle Lease @ \$1000/ 1/2 vehic/month		500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	6000.00
Vehicle Operating @ .22/mile		132.00	133.10	176.00	178.20	180.46	198.00	200.75	220.00	223.30	242.00	245.85	264.00	2393.66
(above includes: gas,oil,maint. & insurance)														
Empl Training		400.00												
Subtotal Indirect Expenses		1032.00	633.10	676.00	678.20	680.46	698.00	700.75	720.00	723.30	742.00	745.85	764.00	8793.66
Admin Expenses:														
Admin Hours		5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	60.00
Wages		150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	1800.00
Payroll Taxes		14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	172.80
Admin Workers Comp		0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	5.40
Commissions														
Subtotal Admin Expenses		169.85	169.85	169.85	169.85	169.85	169.85	169.85	169.85	169.85	169.85	169.85	169.85	2038.20
Marginal Indirect Expenses:														
Advertising														

Liability Insur @ \$1.20/\$1000/mo	2.66	2.72	5.31	5.44	5.58	6.64	6.80	7.97	8.17	9.29	9.53	10.62	80.73
Licensing	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	100.00
Postage @ \$ .37/Piece	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	88.80
Printing	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	60.00
Taxes (B&O) @ Rev X .00484	10.71	10.98	21.42	21.96	22.50	26.77	27.44	32.13	32.93	37.48	38.42	42.84	325.60
Misc													
Subtotal	34.10	34.43	47.46	48.13	48.82	54.15	54.98	60.83	61.83	67.51	68.68	74.19	655.12
Net Profit bef Depr & Amort	-1968.75	-1538.14	-344.51	-283.30	-220.56	267.60	344.12	879.72	971.54	1,491.84	1,598.96	2,103.96	3302.46

COMBINED REGIONS 1-4	KLEEN ENVIRONMENTAL TECHNOLOGIES, INC. BIOHAZARD WASTE DISPOSAL DIVISION PROFORMA PROFIT & LOSS ANALYSIS												Year 1
	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	
No. of Clients Obtained	9	13	20	26	30	32	32	37	37	39	39	43	43
Units for Disposal @ # Clients X 15pu/wk	540	780	1200	1560	1800	1920	1920	2220	2220	2340	2340	2580	21420
Sales @ \$18.44/unit X # Units for Disp	9957.60	14383.20	22128.00	28766.40	33192.00	35404.80	\$35,404.80	\$40,936.80	\$40,936.80	\$43,149.60	\$43,149.60	\$47,575.20	\$394,984.80
Direct Cost of Sales:													
Labor Hours 1 emp up to 1000 units	160	160	320	320	320	320	320	400	400	400	400	400	3920
Labor Wages	3200.00	3200.00	6400.00	6400.00	6400.00	6400.00	6400.00	8000.00	8000.00	8000.00	8000.00	8000.00	78400.00
Payroll Taxes	307.20	307.20	614.40	614.40	614.40	614.40	614.40	768.00	768.00	768.00	768.00	768.00	7526.40
Workers Comp	328.00	328.00	656.00	656.00	656.00	656.00	656.00	820.00	820.00	820.00	820.00	820.00	8036.00
Empl Health Insur	193.60	193.60	387.20	387.20	387.20	387.20	387.20	484.00	484.00	484.00	484.00	484.00	4743.20
Material: Boxes @ \$1.40/box	756.00	1092.00	1680.00	2184.00	2520.00	2688.00	2688.00	3108.00	3108.00	3276.00	3276.00	3612.00	29988.00
Material Lablis @ \$.36/box	194.40	280.80	432.00	561.60	648.00	691.20	691.20	799.20	799.20	842.40	842.40	928.80	7711.20
Disposal @ \$4.00/box	2160.00	3120.00	4800.00	6240.00	7200.00	7680.00	7680.00	8880.00	8880.00	9360.00	9360.00	10320.00	85680.00
Disposal Admin @ \$2.00/box	1080.00	1560.00	2400.00	3120.00	3600.00	3840.00	3840.00	4440.00	4440.00	4680.00	4680.00	5160.00	42840.00
Other													
Subtotal Direct Expenses	8219.20	10081.60	17369.60	20163.20	22025.60	22956.80	22956.80	27299.20	27299.20	28230.40	28230.40	30092.80	264924.80
Gross Profit	1738.40	4301.60	4758.40	8603.20	11166.40	12448.00	12,448.00	13,637.60	13,637.60	14,919.20	14,919.20	17,482.40	130060.00
Gross Profit %	0.17	0.30	0.22	0.30	0.34	0.35	35.2%	33.3%	33.3%	34.6%	34.6%	36.7%	32.9%
Indirect Cost of Sales:													
Miles/month grow	4000.00	4420.00	5200.00	5835.00	6271.00	6427.00	6578.00	7025.00	7191.00	7430.00	7607.00	8023.00	76007.00
Vehicle Lease @ \$1000/ 2 vehicle/month	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	24000.00
Vehicle Operating @ .22/mile	880.00	972.40	1144.00	1283.70	1379.62	1413.94	1447.16	1545.50	1582.02	1634.60	1673.54	1765.06	16721.54
(above includes: gas,oil,maint. & insurance)													
Empl Training	400.00												
Subtotal Indirect Expenses	3280.00	2972.40	3144.00	3283.70	3379.62	3413.94	3447.16	3545.50	3582.02	3634.60	3673.54	3765.06	41121.54
Admin Expenses:													
Admin Hours	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	420.00
Wages	1050.00	1050.00	1050.00	1050.00	1050.00	1050.00	1050.00	1050.00	1050.00	1050.00	1050.00	1050.00	12600.00
Payroll Taxes	100.80	100.80	100.80	100.80	100.80	100.80	100.80	100.80	100.80	100.80	100.80	100.80	1209.60
Admin Workers Comp	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	37.80
Commissions													
Subtotal Admin Expenses	1188.95	1188.95	1188.95	1188.95	1188.95	1188.95	1188.95	1188.95	1188.95	1188.95	1188.95	1188.95	14267.40
Marginal Indirect Expenses:													
Advertising													

Building Insur @ \$.055/sq ft/mo	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Liability Insur @ \$1.20/\$1000/mo	11.95	17.26	26.55	34.52	39.83	42.49	42.49	42.49	42.49	49.12	49.12	49.12	51.78	51.78	51.78	57.09	473.98					
Licensing	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	100.00					
Postage @ \$.37/Piece	3.33	4.81	7.40	9.62	11.10	11.84	11.84	11.84	11.84	13.69	13.69	14.43	14.43	14.43	14.43	15.91	132.09					
Printing	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	240.00					
Taxes (B&O) @ Rev X .00484	48.19	69.61	107.10	139.23	160.65	171.36	171.36	171.36	171.36	198.13	198.13	198.13	208.84	208.84	208.84	230.26	1911.73					
Misc																						
Subtotal	146.81	175.02	224.39	266.70	294.91	309.02	309.02	309.02	309.02	344.28	344.28	344.28	358.39	358.39	358.39	386.60	3517.80					
Net Profit bef Depr & Amort	-2877.36	-34.77	201.06	3863.85	6302.92	7536.09	7,502.87	7,502.87	7,502.87	8,558.87	8,522.35	8,522.35	9,737.26	9,698.32	9,698.32	12,141.79	71153.26					

Tariff No. 1

Original Page

Company Name: Kleen Environmental Technologies, Inc.

**EXHIBIT KRL-6**

**TARRIF NO. 1  
OF  
KLEEN ENVIRONMENTAL TECHNOLOGIES, INC.**

**NAMING RATES FOR THE COLLECTION, TRANSPORTATION, AND DISPOSAL OF SOLID WASTE,  
consisting of Biomedical Wastes in the State of Washington**

**ISSUED BY:**

**Allen McCloskey  
Kleen Environmental Technologies, Inc.  
754 Garfield Street  
Seattle, WA 98109  
Telephone: (206) 285-8010  
Fax: (206) 285-9646**

Issued By: Allen McCloskey, Business Development Manager

1

Issued Date: February 6, 2004

Effective Date: Pending

(For Official Use Only)

Effective: \_\_\_\_\_ Docket No. \_\_\_\_\_ By: \_\_\_\_\_

Tariff No. 1

Original Page

Company Name: Kleen Environmental Technologies, Inc.

All of the pages contained herein are listed consecutively by page numbers. The pages to the tariff and/or any supplements to the tariff listed on this page have issue dates which are the same as, or are prior to, the issue date of this page. Original pages are marked accordingly.

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Issued By: Allen McCloskey, Business Development Manager

2

Issued Date: February 6, 2004

Effective Date: Pending

(For Official Use Only)

Effective: \_\_\_\_\_ Docket No. \_\_\_\_\_ By: \_\_\_\_\_



Tariff No. 1

Original Page

Company Name: Kleen Environmental Technologies, Inc.

**Item 10 Application of rates:**

The rates contained within this tariff cover medical waste management and transportation services rendered by Kleen Environmental Technologies, Inc. to medical waste generators.

Unless otherwise specified, the rates include the following:

1. Use of KET Disposal containers
2. Medical waste electronic tracking & documentation
3. Transportation; and
4. Treatment & Disposal

Unless otherwise provided herein, rates contained in this tariff apply to transportation of biomedical waste, as defined in WAC 480-70-041, in KET disposal containers or other containers provided by Kleen Environmental Technologies, Inc.

**Item 14**

Customers will be charged for lost containers. The charge per container will be (A) \$30.00 for a small tub; \$5.00 for a small box; \$30.00 for a small/medium container; \$30.00 for a medium tub; \$30.00 for a med/large tub; \$30.00 for a 32 gal. medium/large container; \$5.00 for a med/large box; \$30.00 for a large tub; and \$30.00 for large containers.

**Item 15 Maximum Weights:**

The maximum weight allowed per container is:

<u>Container Size</u>	<u>Maximum Weight</u>
Small Tub (10) gal	35lbs
Small Box (15) gal	40lbs
Small/Med (21) gal	50lbs
Medium Tub (21) gal	50lbs
Medium/Large Tub (28) gal	60lbs
Medium/Large (32) gal	60lbs
Med/Large Box (33) gal	40lbs
Large Tub (40) gal	60lbs
Large (48) gal	60lbs

Issued By: Allen McCloskey, Business Development Manager

3

Issued Date: February 6, 2004

Effective Date: Pending

(For Official Use Only)

Effective: \_\_\_\_\_ Docket No. \_\_\_\_\_ By: \_\_\_\_\_

Ticket No. :

Original Page

Company Name: Kleen Environmental Technologies, Inc.

Item 20 Limitations of Service

1. Kleen Environmental Technologies, Inc. will not knowingly accept shipments including containers which are not properly packaged or identified.
2. Kleen Environmental Technologies, Inc. may refuse to accept shipments not immediately accessible to KET vehicles. If Kleen Environmental Technologies, Inc. accepts a shipment from a pick up area designated by the generator that is not adjacent to a loading dock or otherwise immediately accessible to KET vehicles, Item 70 shall apply.
3. KET may refuse to pick up materials from points where the designated pickup area is obstructed at the time of pickup.
4. Rates shall include normal wear and tear on reusable containers. Reusable containers provided to the generator for the storage of biomedical waste shall remain the property of KET. Charges for replacing reusable containers lost by generator are outlined in Item 14.
5. KET reserves the right to modify its container sizes in the future provided the rate per gallon equivalent remains the same and until rate changes per gallon are approved by the Washington Utilities and Transportation Commission.
6. Kleen Environmental Technologies, Inc. will not knowingly accept containers for shipment unless they have sealed bag liners.
7. The generator shall not tender and KET shall not knowingly accept for transportation any container which:
  - a) is not sealed and properly labeled;
  - b) is punctured or materially damaged;
  - c) is overfilled or overweight;
  - d) contains anything other than biomedical waste; or
  - e) contains radioactive materials as defined by the United States Nuclear Regulatory Commission.

In the event KET inadvertently accepts a container described in paragraph 8, Item 70 shall apply.

- 9) Kleen Environmental Technologies, Inc. shall not knowingly accept for transportation any shipment which does not meet packaging, labeling, and handling requirements imposed or required under the law.

Issued By: Allen McCloskey, Business Development Manager

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Issued Date: February 6, 2004

Effective Date: Pending

(For Official Use Only)

Effective: \_\_\_\_\_ Docket No. \_\_\_\_\_ By: \_\_\_\_\_

Tariff No. 1

Original Page

Company Name: Kleen Environmental Technologies, Inc.

Item 30 Rate Schedule for (Biomedical Waste except Pathological, Chemotherapy, and Pharmaceutical Waste)  
Price per container

Container Quantity	Small/Medium 21 Gallon Container	Medium/Large 32 Gallon Container	Large 48 Gallon Container
1	\$33.49	\$49.46	\$72.84
2	\$32.07	\$45.47	\$56.14
3	\$27.57	\$37.48	\$46.40
4	\$24.92	\$32.88	\$39.90
5	\$21.66	\$29.50	\$36.66
6	\$19.82	\$26.73	\$33.88
7	\$18.39	\$25.50	\$31.56
8	\$17.57	\$24.28	\$30.16
9	\$16.55	\$22.43	\$28.76
10	\$15.73	\$21.82	\$27.38
11	\$15.32	\$20.89	\$25.98
12	\$14.71	\$20.28	\$24.60
13	\$14.30	\$19.67	\$23.66
14	\$13.68	\$19.05	\$22.28
15	\$13.48	\$18.44	\$21.34
16	\$13.07	\$18.13	\$17.64
17	\$12.66	\$17.21	\$17.17
18	\$12.46	\$16.90	\$16.70
19	\$12.25	\$16.29	\$15.78
20	\$11.85	\$15.98	\$15.32
21	\$11.53	\$15.36	\$15.32
22	\$11.32	\$15.05	\$15.32
23	\$11.12	\$14.41	\$15.32
24	\$10.91	\$13.21	\$15.32
25	\$10.50	\$12.75	\$15.32
26	\$10.30	\$12.60	\$15.32
27	\$10.09	\$12.29	\$15.32
28	\$9.68	\$11.83	\$15.32
29	\$9.51	\$11.36	\$15.32
30	\$9.15	\$10.56	\$15.32

Note: Rates to be charged shall be upon the total number of containers per pickup, including containers rated under item 90. Rates stated in this item are in addition to charges specified in Items 60, 70.

Note: A minimum of \$40.00 will be charged per scheduled pickup

Note: A Reinstatement Charge will be assessed in accordance with Item 85, when applicable.

Issued By: Allen McCloukey, Business Development Manager

5

Issued Date: February 6, 2004

Effective Date: Pending

(For Official Use Only)

Effective: \_\_\_\_\_ Docket No. \_\_\_\_\_ By: \_\_\_\_\_

Trm/No. 1

(Pages) Page

Company Name: Kleen Environmental Technologies, Inc.

Item 30 Rate Schedule for (Biomedical Waste except Pathological, Chemotherapy, and Pharmaceutical Waste)  
Price per container

Container Quantity	Small/Medium 21 Gallon Container	Medium/Large 32 Gallon Container	Large 48 Gallon Container
31	\$9.15	\$10.14	\$15.32
32	\$8.79	\$10.14	\$13.20
33	\$8.79	\$10.14	\$13.20
34	\$8.79	\$10.14	\$13.20
35	\$8.79	\$10.14	\$13.20
36	\$8.79	\$10.14	\$13.20
37	\$8.79	\$10.14	\$13.20
38	\$8.79	\$10.14	\$13.20
39	\$8.64	\$10.14	\$13.20
40	\$8.64	\$10.14	\$13.20
41	\$8.64	\$10.14	\$13.20
42	\$8.64	\$10.14	\$13.20
43	\$8.64	\$10.14	\$13.20
44	\$8.64	\$10.14	\$13.20
45	\$8.64	\$10.14	\$13.20
46	\$8.64	\$10.14	\$13.20
47	\$8.64	\$10.14	\$13.20
48	\$8.64	\$10.14	\$13.20
49	\$8.64	\$10.14	\$13.20
50	\$8.64	\$10.14	\$13.20
51	\$8.64	\$10.14	\$13.20
52	\$8.64	\$8.72	\$13.20
53	\$8.64	\$8.72	\$13.20
54	\$8.64	\$8.72	\$13.20
55	\$8.64	\$8.72	\$13.20
56	\$8.64	\$8.72	\$13.20
57	\$8.64	\$8.72	\$13.20
58	\$8.64	\$8.72	\$13.20
59	\$8.64	\$8.72	\$13.20
60	\$8.64	\$8.72	\$13.20

Note: Rates to be charged shall be upon the total number of containers per pickup, including containers rated under item 90. Rates stated in this item are in addition to charges specified in Items 60, 70.

Note: A minimum of \$40.00 will be charged per scheduled pickup

Note: A Reinstatement Charge will be assessed in accordance with Item 85, when applicable.

Issued By: Allen McCloskey, Business Development Manager

6

Issued Date: February 6, 2004

Effective Date: Pending

(For Official Use Only)

Effective: \_\_\_\_\_ Docket No. \_\_\_\_\_ By: \_\_\_\_\_

Tariff No. 1

Original Page

Company Name: Kleen Environmental Technologies, Inc.

Item 30 Rate Schedule for (Biomedical Waste except Pathological, Chemotherapy, and Pharmaceutical Waste)  
Price per container

Container Quantity	Small Tub 10 Gallon	Small Box 15 Gallon	Medium Tub 20 Gallon	Med.Large Tub 28 Gallon	Med.Large Box 33 Gallon	Large Tub 40 Gallon
1	19.40	29.96	32.07	43.64	49.59	61.84
2	15.73	22.11	30.71	40.12	45.59	56.84
3	15.25	21.43	26.40	33.08	37.58	46.86
4	15.06	21.16	23.86	29.01	32.96	41.09
5	14.20	19.95	20.73	26.02	29.57	36.87
6	12.96	18.20	18.97	23.59	26.80	33.41
7	12.28	17.26	17.61	22.50	25.57	31.88
8	11.71	16.45	16.82	21.42	24.34	30.34
9	10.75	15.10	15.84	19.79	22.49	28.04
10	10.17	14.29	15.06	19.25	21.87	27.27
11	9.98	14.02	14.67	18.44	20.95	26.12
12	9.31	13.08	14.09	17.90	20.33	25.35
13	9.12	12.81	13.69	17.35	19.72	24.59
14	8.64	12.14	13.10	16.81	19.10	23.82
15	8.44	11.87	12.91	16.27	18.48	23.05
16	8.25	11.59	12.51	15.99	18.18	22.66
17	7.96	11.19	12.13	15.18	17.25	21.51
18	7.68	10.79	11.94	14.91	16.94	21.13
19	7.39	10.38	11.74	14.37	16.33	20.36
20	7.39	10.27	11.52	14.14	16.02	19.98
21	7.30	10.11	11.00	13.56	15.40	19.35
22	7.20	10.14	10.90	13.29	15.10	18.85
23	7.00	9.84	10.56	12.72	14.45	18.02
24	6.93	9.74	10.39	11.66	13.25	16.52
25	6.83	9.60	10.00	11.26	12.79	15.94
26	6.73	9.47	9.80	11.12	12.63	15.75
27	6.64	9.33	9.61	10.84	12.32	15.37
28	6.54	9.20	9.23	10.44	11.88	14.80
29	6.44	9.06	9.02	10.17	11.55	14.41
30	6.35	8.93	9.02	9.22	10.48	13.07

Note: Rates to be charged shall be upon the total number of containers per pickup, including containers rated under item 90. Rates stated in this item are in addition to charges specified in Items 60, 70.

Note: A minimum of \$40.00 will be charged per scheduled pickup

Note: A Reinstatement Charge will be assessed in accordance with Item 85, when applicable.

Issued By: Allen McCloskey, Business Development Manager

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Issued Date: February 6, 2004

Effective Date: Pending

(For Official Use Only)

Effective: \_\_\_\_\_ Docket No. \_\_\_\_\_ By: \_\_\_\_\_

Tariff No. 1

(Original Page)

Company Name: Kleen Environmental Technologies, Inc.

Item 30 Rate Schedule for (Biomedical Waste except Pathological, Chemotherapy, and Pharmaceutical Waste)  
Price per container

Container Quantity	Small Tub 10 Gallon	Small Box 15 Gallon	Medium Tub 20 Gallon	Med.Large Tub 28 Gallon	Med.Large Box 33 Gallon	Large Tub 40 Gallon
31	5.98	8.41	9.02	9.10	10.25	12.80
32	6.20	8.73	9.02	9.10	10.25	12.80
33	6.11	8.59	9.02	9.10	10.25	12.80
34	6.09	8.60	9.02	9.10	10.25	12.80
35	5.99	8.46	9.02	9.10	10.25	12.80
36	5.89	8.32	9.02	9.10	10.25	12.80
37	5.79	8.18	9.02	9.10	10.25	12.80
38	5.79	8.18	9.02	9.10	10.25	12.80
39	5.77	8.15	8.30	9.10	10.25	12.80
40	5.75	8.12	8.30	9.10	10.25	12.80
41	5.69	8.04	8.30	9.10	10.25	12.80
42	5.59	7.90	8.30	9.10	10.25	12.80
43	5.55	7.84	8.30	9.10	10.25	12.80
44	5.49	7.76	8.30	9.10	10.25	12.80
45	5.39	7.62	8.30	9.10	10.25	12.80
46	5.35	7.56	8.30	9.10	10.25	12.80
47	5.29	7.48	8.30	9.10	10.25	12.80
48	5.25	7.42	8.30	9.10	10.25	12.80
49	5.19	7.34	8.30	9.10	10.25	12.80
50	5.09	7.20	8.30	9.10	10.25	12.80
51	4.99	7.06	8.30	7.80	8.92	11.10
52	4.90	6.92	8.30	7.80	8.92	11.10
53	4.85	6.86	8.30	7.80	8.92	11.10
54	4.80	6.78	8.30	7.80	8.92	11.10
55	4.70	6.64	8.30	7.80	8.92	11.10
56	4.65	6.58	8.30	7.80	8.92	11.10
57	4.60	6.50	8.30	7.80	8.92	11.10
58	4.50	6.36	8.30	7.80	8.92	11.10
59	4.00	5.66	8.15	7.80	8.92	11.10
60	4.00	5.66	8.15	7.80	8.92	11.10

Note: Rates to be charged shall be upon the total number of containers per pickup, including containers rated under item 90. Rates stated in this item are in addition to charges specified in Items 60, 70.

Note: A minimum of \$40.00 will be charged per scheduled pickup

Note: A Reinstatement Charge will be assessed in accordance with Item 85, when applicable.

Issued By: Allen McCloskey, Business Development Manager

8

Issued Date: February 6, 2004

Effective Date: Pending

(For Official Use Only)

Effective: \_\_\_\_\_ Docket No. \_\_\_\_\_ By: \_\_\_\_\_

Tariff No. 1

Original Page

Company Name: Kleen Environmental Technologies, Inc.

Item 40 Tariff matter in this item are not applicable

Item 50 Tariff matter in this item are not applicable

Item 60 Delinquent Fees:

In addition to the rates and charges shown herein, a late charge in the amount of one percent (1%) will be added to any account which remains unpaid at the time of the next regular billing.

Item 70 Special Handling or Packaging Charges:

The following charges will be addressed when the carrier is required to provide special handling or packaging because of improper packaging of the material shipped by the generator, the shipment of improper waste materials, overweight containers or the generator's special loading requirements. \$2.00 per gallon in addition to all other rates and charges shown herein.

Note: If Kleen Environmental Technologies, Inc accepts a shipment from a pickup location designated by the generator that is not adjacent to a loading dock or otherwise immediately accessible to KET vehicles, an additional charge of \$30.00 for each roundtrip required to be made by the driver between the vehicle and the pickup area will apply in addition to all other applicable rates and charges.

Item 85 Reinstatement Charge:

In addition to the other rates and charges shown herein, a Reinstatement Charge of \$160.00 will be charged to any generator that has cancelled service within the preceding 12 months and wishes to reinstate service. The Reinstatement Charge includes re-delivery of a container(s) to the generator.

Item 90 Rates for (Non-RCRA; Non-State) Chemotherapy Waste, Pathological Waste, and Pharmaceutical

- Medium/Large Tub (28 gal.): \$30.00
- Small box (12x12x24-15 gal.): \$20/box
- Medium/large box (18x18x26-33gal.): \$30/box

The rates stated in this Item 90 are flat rates per container and do not vary with the number of containers tendered for pickup. Kleen Environmental Technologies will require Pathological Waste, Chemotherapy Waste, and Pharmaceutical Waste to be packaged by the generator in reusable plastic Medium/Large Tubs (28 gal.) provided by KET to the extent available. The other containers indicated may be used only to the extent that Medium/Large Tubs are not available from KET or the alternative containers are required to be used, at KET's direction. Charges will also be assessed under Items 60, 70, and 85, when applicable.

Issued By: Allen McCloskey, Business Development Manager

9

Issued Date: February 6, 2004

Effective Date: Pending

(For Official Use Only)

Effective: \_\_\_\_\_ Docket No. \_\_\_\_\_ By: \_\_\_\_\_

Tariff No. 1

Original Page

Company Name: Kleen Environmental Technologies, Inc.

For the sake of clarity and the purpose of this item 90:

“Pathological Waste” means “Pathological Waste,” as defined in the definition of “Biomedical Waste” found within WAC 480-70-041.

“Chemotherapy Waste” means sharps, syringes, IV tubing/bags/bottles, vials, and other discarded contaminated items generated in the preparation and administration of cytotoxic/antineoplastic drugs. Only *empty* containers/bags are acceptable with residue not to exceed 3% of total volume.

“Pharmaceutical Waste” means pharmaceutical waste which has been properly characterized as not hazardous under the Resource Conservation and Recover Act (RCRA) regulations and criteria (or more stringent state regulations, where applicable) and which has been packaged and labeled by the generator and approved and accepted by Kleen Environmental Technologies in accordance with a Pharmaceutical Waste Acceptance Agreement executed by Kleen Environmental Technologies, Inc. and the generator. Only properly packaged and labeled Pharmaceutical Waste covered by a Pharmaceutical Waste Agreement may be tendered to Kleen Environmental Technologies, Inc. by the generator.

Issued By: Allen McCloskey, Business Development Manager

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Issued Date: February 6, 2004

Effective Date: Pending

(For Official Use Only)

Effective: \_\_\_\_\_ Docket No. \_\_\_\_\_ By: \_\_\_\_\_



Supplements Nos. 1, 2, 3, 4, 5, 6 and 7 are the only supplements in effect at this time.

**Supplement No. 1**

**Of**

**KLEEN ENVIRONMENTAL TECHNOLOGIES, INC.**

**Certificate Number G-Pending**

**On and after the effective date hereof, the following provisions shall apply:**

**In addition to the rates and charges otherwise provided, a charge of 10.0% to implement Ordinance No. 116460 will be added to bills for generators located within the city limits of the City of Seattle.**

Issue Date: February 5, 2004

Effective Date: Pending

(FOR OFFICIAL USE ONLY)

Effective: \_\_\_\_\_ Order TO: \_\_\_\_\_

Other: \_\_\_\_\_

LSN: \_\_\_\_\_ IAA: \_\_\_\_\_ Hearing: \_\_\_\_\_

By: \_\_\_\_\_

Supplements Nos. 1, 2, 3, 4, 5, 6 and 7 are the only supplements in effect at this time.

**Supplement No. 2**

Of

**KLEEN ENVIRONMENTAL TECHNOLOGIES, INC.**

**Certificate Number G-Pending**

On and after the effective date hereof, the following provisions shall apply:

In addition to the rates and charges otherwise provided, a charge of 6.2% to implement Ordinance No. 2422 will be added to bills for generators located within the city limits of the City of Bellevue.

Issue Date: February 6, 2004

Effective Date: Pending

(FOR OFFICIAL USE ONLY)

Effective \_\_\_\_\_ Docket TG- \_\_\_\_\_

Other \_\_\_\_\_

LSN \_\_\_\_\_ TAA \_\_\_\_\_ Hearing \_\_\_\_\_

By \_\_\_\_\_

Supplements Nos. 1, 2, 3, 4, 5, 6 and 7 are the only supplements in effect at this time.

**Supplement No. 3**

Of

**KLEEN ENVIRONMENTAL TECHNOLOGIES, INC.**

**Certificate Number G-Pending**

On and after the effective date hereof, the following provisions shall apply:

In addition to the rates and charges otherwise provided, a charge of 14.0% to implement Ordinance No. 4375 will be added to bills for generators located within the city limits of the City of Bremerton.

Issue Date: February 6, 2004

Effective Date: Pending

(FOR OFFICIAL USE ONLY)

Effective: \_\_\_\_\_ Docket TG- \_\_\_\_\_

Order: \_\_\_\_\_

LSN: \_\_\_\_\_ IAA: \_\_\_\_\_ Hearing: \_\_\_\_\_

By \_\_\_\_\_

Supplements Nos. 1, 2, 3, 4, 5, 6 and 7 are the only supplements in effect at this time.

**Supplement No. 4**

**Of**

**KLEEN ENVIRONMENTAL TECHNOLOGIES, INC.**

**Certificate Number G-Pending**

On and after the effective date hereof, the following provisions shall apply:

In addition to the rates and charges otherwise provided, a charge of 17.0% to implement Ordinance No. C-30113 will be added to bills for generators located within the city limits of the City of Spokane.

Issue Date: February 6, 2004

Effective Date: Pending

(FOR OFFICIAL USE ONLY)

Effective: \_\_\_\_\_ Docket TC# \_\_\_\_\_

Other: \_\_\_\_\_

LSN \_\_\_\_\_ IAA# \_\_\_\_\_

By \_\_\_\_\_

Supplements (Nos. 1, 2, 3, 4, 5, 6 and 7 are the only supplements in effect at this time.

**Supplement No. 5**

Of

**KLEEN ENVIRONMENTAL TECHNOLOGIES, INC.**

**Certificate Number G-Pending**

On and after the effective date hereof, the following provisions shall apply:

In addition to the rates and charges otherwise provided, a charge of 5.0% to implement Ordinance No. 96-276 will be added to bills for generators located within the city limits of the City of Federal Way.

Issue Date: February 6, 2004

Effective Date: Pending

(FOR OFFICIAL USE ONLY)

Effective: \_\_\_\_\_ Docket TO: \_\_\_\_\_

Other: \_\_\_\_\_

LSN: \_\_\_\_\_ IAA: \_\_\_\_\_ Hearing: \_\_\_\_\_

By: \_\_\_\_\_

Supplements Nos. 1, 2, 3, 4, 5, 6 and 7 are the only supplements in effect at this time.

**Supplement No. 6**

Of

**KLEEN ENVIRONMENTAL TECHNOLOGIES, INC.**

**Certificate Number G-Pending**

On and after the effective date hereof, the following provisions shall apply:

In addition to the rates and charges otherwise provided, a charge of 6.0% to implement Ordinance No. 1577 will be added to bills for generators located within the city limits of the City of Port Orchard.

Issue Date: February 6, 2004

Effective Date: Pending

(FOR OFFICIAL USE ONLY)

Effective: \_\_\_\_\_ Declared: G-

Order: \_\_\_\_\_

LSN: \_\_\_\_\_ IAA: \_\_\_\_\_ Housing: \_\_\_\_\_

By: \_\_\_\_\_

Supplements Nos. 1, 2, 3, 4, 5, 6 and 7 are the only supplements in effect at this time.

**Supplement No. 7**

Of

**KLEEN ENVIRONMENTAL TECHNOLOGIES, INC.**

**Certificate Number G-Pending**

On and after the effective date hereof, the following provisions shall apply:

In addition to the rates and charges otherwise provided, should a generator choose to utilize Kleen Environmentals On-Site packaging services the hourly rate associated with these services shall be as follows: \$48.50 per Man-Hour for HAZ-TECH II (40 HAZ-WOPER Personnel.)

Issue Date: February 6, 2004

Effective Date: Pending

(FOR OFFICIAL USE ONLY)

Effective: \_\_\_\_\_ Docket TO: \_\_\_\_\_

Other: \_\_\_\_\_

LSN: \_\_\_\_\_ IAA: \_\_\_\_\_ Hearing: \_\_\_\_\_

By: \_\_\_\_\_

**EXHIBIT DCP-IT**

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**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 DARIN  
PERROLLAZ**

I, Darin Perrollaz, 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 Vice President, Technical Services & Safety Compliance Manager and a shareholder of Kleen Environmental Technologies, Inc. My duties include design and implementation of physical/chemical profiles for designating hazardous wastes. I specialize in developing comprehensive lab-packing and waste tracking programs for universities, medical laboratories, hospital pharmacies, and various research institutes. I have been with Kleen for 12 years and have held the position of Vice President, Technical Services & Safety Compliance Manager for all those years.

I have been employed in the environmental industry for 15 years, including 5 years as Manager of Environmental Services for Envirotech Systems, Inc. I have experience and training in the following areas:



1 OSHA/WISHA 40/80-hour HAZWOPER  
2 Confined Space Entry (Authorized Entrant/Attendant  
3 Washington State Registered Site Assessor  
4 Idaho State Registered Site Assesor  
5 Oregon State Soil Matrix Supervisor  
6 EPA Lead Supervisor  
7 Underground Storage Tank Decomissioner  
8 Explosive and Reactive Chemical Training  
9 Compressed gas cylinder management  
10 Emergency Response  
11 Clandestine drug lab cleanup Supervisor, WA State  
12 Indoor air quality-Mold

13 I have a Bachelors Degree in Fisheries and Wildlife from Lake Superior State University  
14 in Michigan (1982).

15 I am also a Registered Pharmacist/Technician (1989). I was employed by Sweedish  
16 Hospital/Fred Hutchinson Cancer Research Center for 5 years in the bone marrow transplant  
17 unit and continue to work for Highline Community Hospital on a per-diem basis.

#### 18 PACKAGING

19 If requested by a generator each container will be packaged by a Kleen representative on  
20 site, examined for potential leakage, labeled to assure compliance with the Department of  
21 Transportation and the Federal Motor Carrier Safety Administration regulations. A waste  
22 manifest will be generated by our staff according to inventory and will be confirmed onsite. All  
documents will be verified, completed, and signed off.

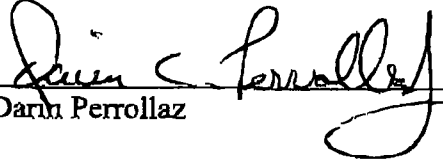
#### 23 SAFETY

24 Prior to implementation of proposed biomedical waste services all key employees and  
25 those persons having contact with such waste will undergo bloodborne pathogens training and

1 certification. Additional training may include training specific to United States Department of  
2 Transportation labeling and packaging requirements for such waste.

3 Other safety issues are addressed in our exposure control plan a true and correct copy of  
4 which is attached hereto as Exhibit A.

5 DATED this \_\_\_\_\_ day of August, 2004, at \_\_\_\_\_.

6   
7 Darin Perrollaz

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# *Biomedical Waste Standard Operating Procedures*

In accordance with WAC 480-70-436, Kleen Environmental has developed the following biomedical waste operating plan to eliminate and/or minimize the exposure to blood and other potentially infectious materials as detailed in the blood borne pathogens standard.

## **PURPOSE**

This document was prepared by Allen McCloskey and shall be implemented by Darin Perrollaz with careful consideration to those prevailing regulations. This document is intended for the exclusive use of Kleen Environmental Technologies, Inc. in dealing with infectious waste management during the conduct of its medical waste management and transportation division.

## **IDENTIFICATION**

Kleen Environmental Technologies, Inc.  
754 Garfield Street  
Seattle, WA 98109  
Phone: 206-285-8010

## **DEFINITIONS**

“Biomedical Waste” means the following types of waste, as codified in 49 CFR §173.134 and WAC 480-70-041.

**Animal Waste:** Means waste animal carcasses, body parts, and bedding of animals that are known to be infected with, or that have been inoculated with, human pathogenic microorganisms infectious to humans.

**Biosafety level 4 disease waste:** Means waste contaminated with blood, excretions, exudates, or secretions from humans or animals who are isolated to protect others from highly communicable infectious disease that are identified as pathogenic organisms assigned to biosafety level 4 by the Centers for Disease Control, National Institute of Health, Biosafety in Microbiological and Biomedical Laboratories, current edition.

**Cultures and stocks:** Means wastes infectious to humans and includes specimen cultures, cultures and stocks of etiologic agents, wastes from production of biologicals and serums, discarded live and attenuated vaccines, laboratory waste that has come into contact with cultures and stocks of etiologic agents or blood specimens. Such waste includes, but is not limited to, culture dishes, blood specimen tubes, and devices used to transfer, inoculate, and mix cultures.

**Human blood and blood products:** Means discarded waste human blood and blood components, and materials containing free-flowing blood and blood products.

**Pathological Waste:** Means waste human source biopsy materials, tissues, and anatomical parts that emanate from surgery, obstetrical procedures, and autopsy. Pathological waste does not include teeth, human corpses, remains, and anatomical parts that are intended for interment or cremation.

**Sharps Waste:** Means all hypodermic needles, syringes with needles attached, IV tubing with needles attached, scalpel blades, and lancets that have been removed from the original sterile package.

**Biohazardous or biomedical waste generator:** Means any person, by site, whose act or process produces infectious waste, or whose act first caused an infectious waste to become subject to regulation. In cases where more than one person, e.g., doctors with separate medical practices, are located in the same building, each individual business entity is a separate generator, and shall be identified as such on all shipping papers.

**Biosolids:** Means municipal sewage sludge that is primarily organic, semisolid product resulting from the wastewater treatment process.

**Company:** Means a solid waste collection company, in this case Kleen Environmental.

**Disposal Site:** Means the location where any final treatment, utilization, processing, or deposit of solid waste occurs.

**Hazardous Waste:** Means any material that is subject to the Hazardous Waste Manifest Requirements of the U.S. Environmental Protection Agency specified in 40 CFR Part 262.

**Incineration:** Means to reduce the volume of solid waste by use of an enclosed device using controlled flame combustion.

**Incinerator:** Means a site where solid waste is reduced in volume by use of an enclosed device using controlled flame combustion. For the purpose of KET operations Covanta Energy of Brooks, OR shall be the incinerator site used for final disposal.

**Treatment:** Means incineration, sterilization, or other method, technique, or process used to minimize the risk of transmitting an infectious disease by making it noninfectious.

**Staff:** Means those persons employed by Kleen Environmental Technologies, Inc.

**Authorized Person(s):** Means those staff persons granted access to areas utilized for storage of medical waste. Specifically those persons you have completed the bloodborne pathogens training and who are familiar with Kleen Environmental's Exposure Control Plan.

Shipping Papers: Means a shipping order, bill of lading, manifest, or other shipping document serving a similar purpose and containing the information required in WAC 480-70-471

Vehicle: Means Kleen Environmental automobiles/trucks/vans used in the course of conducting the business of transporting medical waste for storage/treatment/disposal.

Administrator: Means Darin Perrollaz of Kleen Environmental or his designee.

KET: Means Kleen Environmental Technologies.

#### ADMINISTRATION and COMPLIANCE

Darin Perrollaz, Vice President of Technical Services, shall be the administrator of this plan and is responsible for its implementation. Employees who are identified as having occupational exposure are required to comply with the procedures, requirements and practices outlined in this operating plan. Failure to follow these procedures shall result in disciplinary action.

#### SEGREGATION of MEDICAL WASTE

In an effort to comply with the standing policy that medical waste be kept separate from any other solid waste until treatment or disposal, Kleen Environmental will take the following precautions:

During the process of collecting biomedical waste for disposal Kleen Environmental shall allocate a separate vehicle that will be used to collect only those materials identified and labeled as biomedical waste. No other waste shall be transported in this vehicle while in-route to or from generator location or during transportation to treatment/disposal facility.

#### STORAGE of MEDICAL WASTE

If for any reason biomedical waste collected and transported by authorized staff needs to be placed in storage, Kleen Environmental shall place units of medical waste in refrigerate storage for no longer than 15 days. Waste shall be placed in storage separate from any other waste type Biomedical waste shall be stored in a nonputrescent state and refrigerated when necessary. The storage area shall be secured with lock and alarm and accessible only to those persons identified within this plan as authorized personnel. Storage areas will be conspicuously marked with a sign twelve inches by twelve inches (12"x12") with the words "Biomedical Waste" and the international biohazard symbol. Storage areas shall be kept in a sanitary condition and a spill kit kept on site should a spill occur.

#### AUTHORIZED PERSONS

Persons with Authorized access to storage areas:

Bob Olson-General Manager KET

Darin Perrollaz-Technical Services  
Allen McCloskey-Director of Biowaste Services  
Ray Castillo-HAZTECH, Driver  
Don Spruill-HAZTECH, Driver

Generally no person without bloodborne pathogens training and certification shall be granted access to those areas used as storage for biohazard waste.

Additionally, no person without bloodborne pathogens training and certification shall be allowed to handle, package, load, unload, or have any contact directly or indirectly with biohazard waste.

Only those persons having undergone the 40 HAZWOPER certification and bloodborne pathogens certification shall be allowed to collect, transport, and dispose of biomedical waste. Copies of required certificates and training records shall be retained in each employees employment file.

#### ACCIDENTS/SPILLS

All accidents and spills that occur during collection, transportation, storage and processing will be reported to your immediate supervisor who will then notify Darin Perrollaz, Administrator for this plan. Upon notification Mr. Perrollaz or his designee will evaluate the incident and take necessary precautions to contain the spill. The type of infectious material will be determined and proper disinfectants will be used. Employees who are containing and cleaning the spill will wear all necessary protective clothing to prevent infecting themselves. The spill material will be placed in either a double bagged biohazard bag or a sharps container if the situation warrants such a container. During cleaning the area will be sealed off to all non-authorized personnel. The waste, along with all contaminated articles, will be packaged and transported for disposal in the same manner as other medical infectious waste.

#### PERSONNEL EXPOSURE

Should an individual become contaminated, this individual will be instructed in proper decontamination procedures or will be transported to a local hospital if penetration of infectious agent occurred. All spills occurring at a KET facility that exceed an amount of more than one cubic foot of waste or more than once half the contents of a container with a maximum capacity of two cubic feet will be reported to the Environmental Protection Agency within 48 hours. Spill kits which include procedures or cleaning of a spill shall be located in vehicles, storage areas, and those other areas where infectious waste is located.

#### FIRES and EXPLOSIONS

Should a fire or explosion occur in which infectious waste is involved, the heat of the fire will incinerate the waste, thus rendering it harmless. If a fire should partially destroy the infectious waste, the remainder will be handled in the same manner as if a spill occurred. The local fire department shall be made aware of the infectious materials located at any KET facility and shall have instructions to only contain, not extinguish, fires that may

spread infectious waste. Additionally, it shall be understood that the Fire Chief, once on site, will assume the responsibility of managing control of the fire.

## FLOODS

Any KET facility that will be used for the purpose of transporting, storing, packaging, etc. of medical waste shall be well above the flood plane of the location and therefore there is little chance that the area will be affected by flooding. However, if for some reason there is an act of nature that causes the area or the areas directly adjacent thereto be to flood infectious waste shall be placed in hard plastic non-absorbent containers and if necessary relocated to a temporary storage unit.

## EMERGENCY AUTHORITIES

Plan Administrator  
Darin Perrollaz  
Office 206-285-8010  
Mobile 206-285-4091

Allen McCloskey  
Division Director  
Office 206-285-8010  
Mobile 206-931-9251

Bob Olson  
GM Kleen Environmental  
Office 206-285-8010  
Mobile 206-396-4267

Local Fire Department  
Seattle Fire District  
301 2<sup>nd</sup> Ave South  
Seattle, WA 98104  
206-386-1490 or 9-1-1

Local Police Department  
Seattle Police  
3001 S. Myrtle Ave  
Seattle, WA 98133  
206-684-0850 or 9-1-1

Local Health Department  
King County Health  
999 Third Ave  
Seattle, WA 98104  
206-296-4807

State Department of Ecology  
Washington State Dept. of Ecology  
3190 160<sup>th</sup> Ave. SE  
Bellevue, WA 98008  
425-649-7056  
1-800-258-5990

Local Hospital  
Virginia Mason Medical Ctr.  
925 Seneca Street  
Seattle, WA 98111  
206-624-1144

## EMERGENCY RESPONSE EQUIPMENT

- A. A quantity of spill pillows designed to absorb a minimum of ten gallons.
- B. A quantity of concentrated disinfectant to make one gallon of approved diluted disinfectant contained in a spray bottle capable of dispensing a mist or stream at a distance.
- C. A minimum of ten biohazard bags that meet the ASTM 165 gallon dropped dart test and the 75 pound carry test.
- D. A minimum of one set of liquid impermeable and disposable overalls, gloves, boots, caps, protective eyewear and tape.
- E. A first aid kit
- F. Boundary tape
- G. Fire extinguisher

## RESPONSIBILITIES of PLAN ADMINISTRATOR

The Plan Administrator or his designee shall be available twenty four (24) hours a day, seven (7) days a week. The administrator shall be available by work phone, home phone, or cellular phones.

## NOTIFICATION

The administrator or his designee shall be responsible for the oversight of all emergency situations and verifying that an emergency involving infectious waste warrants the assistance of other emergency authorities such as the fire department or the health department. The administrator or his designee will contact the Washington State Department of Ecology should a spill or accident occur which might contaminate surrounding natural resources or the environment.

## ASSESSMENT of THREAT to PUBLIC HEALTH and SAFETY

Infectious waste is located in such areas that are used only for the purpose of housing infectious waste. There shall be no public access to these areas and those authorized persons granted access shall be trained and cognizant of the hazards present. Proper signage shall identify this area as an infectious waste area in order to notify other persons of hazards present. In the event of a major incident/spill, which in the opinion of the administrator or his designee, would constitute a danger to the general public, the Seattle King County Health Department would be notified. The Washington State Department of Ecology would be notified only if there was a danger of contamination to the environment.

## DESIGNATION of ALTERNATE TREATMENT FACILITY

Since Hospital Sterilization Services has several hydroclaves capable of sterilizing infectious waste, it is not likely that an alternate facility will be utilized for waste disposed of using this method. If for any reason the incineration facility is out of operation for a short period of time, infectious waste shall be stored in refrigerated storage area until ready for transport. Infectious waste awaiting transport for incineration shall be stored no longer than seventy-two hours.

## PACKAGING



In compliance with those requirements codified in CFR 49 §172.323 all packages i.e. red bags, corrugated boxes, transport containers, or any other receptacle used to package medical waste shall be labeled with the above international biohazard symbol. Additionally, medical biohazard waste shall be placed into an infectious waste red bag (1.5-mil thick red plastic bag) meeting ASTM-D-1709-97 & 1922-94a, which is then placed into a UN rated, DOT approved corrugated box. The red bag shall be twisted and hand tied in a single knot. The corrugated box shall be sealed with 2 inch wide pressure sensitive poly tape.



In accordance with WAC 480-70-451 red bag waste shall be placed into secondary containment that meet the following standards:

- a. Leak-resistant
- b. In good repair; and
- c. Labeled in accordance with applicable federal standards.

Note: Packaging and containers marked or labeled as containing biomedical waste will not be used to ship or transport waste that does not meet the definition of biomedical waste.

## SHIPPING PAPERS

1. In accordance with the language codified within WAC 480-70-471 and 49 CFR §172.200 through §172.205, each package and any shipping papers associated with each shipment transported shall be labeled with a water-resistant international biohazard symbol and contain the following:
  - a. the generators name, address, and telephone number
  - b. the transporters name, address, and telephone number
  - c. storage facility names, address, and telephone number
  - d. treatment facility name, address, and telephone number
  - e. the general type and quantity of biomedical waste collected
  - f. date of shipment
  - g. a signature by a representative of the generator, acknowledging delivery and compliance with all applicable federal, state and local rules regarding packaging and containment; and
  - h. a signature by a KET representative acknowledging receipt
2. a legible copy of the shipping papers will accompany the shipment. At the destination, the shipping papers will be signed by a representative of the facility accepting the biomedical waste for treatment, storage or disposal, acknowledging acceptance.
3. a copy of the shipping papers of each shipment will be kept on file at the main office of KET for a minimum of three years and shall be made available to the commission or its authorized representatives.

Records of medical waste shall be maintained for each shipment and shall include the information listed in the above paragraph. The information shall be maintained in both hard copy and electronic format at the main office of Kleen Environmental for no less than three years.

1. amount of waste by number of units (piece count)
2. date shipped
3. copies of manifests
4. copies of certificates of destruction
5. weight tickets
6. any and all paper work generated during pick-up, transport, storage, treatment

## RE-PACKAGING

Re-packing shall be the responsibility of KET authorized personnel. The proper containers that are needed to ship the infectious waste to treatment and disposal facilities shall be provided by Kleen Environmental.

## DETERMINING WHEN to IMPLEMENT CLEAN-UP

Clean-up procedures will be implemented after the administrator or his designee assesses the situation to determine what hazards exist. It will be his determination as to who will clean the spill and what procedures will be followed. Proper protective procedures will be implemented to assure that no danger will occur to those who will clean the spill and what procedures will be followed. Proper protective procedures will be implemented to assure that no danger will occur to those individuals cleaning the spill. Only those persons trained and familiar bloodborne microbiological hazards will attempt to contain and clean a spill and they will be assigned by the administrator or his designee.

## VEHICLES USED to TRANSPORT MEDICAL WASTE

Prior to mobilization to any generator site and/or disposal facility driver shall inspect the vehicle to ensure that the vehicle is safe and conditioned for highway travel. Each vehicle used by Kleen Environmental shall be equipped with cargo compartments that meet the requirements of WAC 480-70-466

- (a) Every vehicle shall be secured to limit access at all times, except by those company authorized personnel during loading and unloading;
- (b) Vehicle's shall be fully enclosed;
- (c) Vehicle's shall be leak-proof; secondary containment system 110% of largest container;
- (d) Cargo compartment shall be made of nonporous material impervious to biomedical waste; and
- (e) Cargo compartment shall be physically separated from the drivers compartment.

## MARKING of VEHICLES USED to TRANSPORT MEDICAL WASTE



In compliance with 49 CFR §172.323 all vehicles used to transport biohazard waste shall be marked/placarded with the international biohazard waste symbol on each side and each end of the vehicle.

## DECONTAMINATION OF VEHICLE(S)

At the end of every business day and/or prior to mobilization to generator site and/or disposal facility or as may be necessary to ensure sterilization, driver(s) shall

decontaminate vehicle cargo compartments. Decontamination procedures shall be conducted as follows:

1. Absorbition of free liquids if present and decontamination with 6% chlorine bleach.
2. Following application of 6% chlorine bleach, the driver shall apply amphyll and allow a contact time of 30 minutes.
3. Waste water from cleaning of vehicle cargo compartment shall be collected in secondary containment system and taken to a "Gray Water" treatment facility.

#### CHAIN of COMMAND

The chain of command begins with the administrator. It will be his responsibility to call upon trained personnel to assist in the event of a spill or accident. It will also be his responsibility to call upon trained personnel to assist with an emergency situation. The administrators designee can, if designated to do so, assign clean up tasks to those in the department who are capable of such tasks. In the absence of the administrator, the designee will assume the responsibilities of the administrator.

#### ASSESSMENT OF PROBLEM (Severity)

Assessment of the problem will be conducted by the administrator. Assistance will be given to those involved and those with knowledge of the hazard. The administrator will determine the severity of the circumstances and will notify the appropriate agencies if a threat to public health should occur. The administrator will determine if the storage areas should be evacuated or if an injured person should be treated at a medical facility.

#### MINOR INCIDENTS

Steps to Follow: The following steps will be followed for minor incidents:

- a. the administrator will be notified;
- b. authorized and trained personnel will determine the extent of the spill and the infectious agents present;
- c. authorized and trained personnel will wear personal protective clothing and will contain the spill with paper absorbent or spill pillows;
- d. disinfectant will be placed on the spill and allowed to penetrate the material.
- e. the paper absorbent or spill pillows will be placed in the proper disposal container and packaged for disposal in the same manner as other medical waste transported for disposal.
- f. the site will be disinfected a second time and the area will be cleaned again.

#### PERSONS to NOTIFY

In the case of a minor incident the following persons will be notified:

- a. Administrator
- b. Administrators designee
- c. KET General Manager

#### IMMINENT DANGER

Steps to follow: The following steps will be followed in case of a major incident:

- a. the administrator will be notified;
- b. the administrator or his designee will go to the spill area and assess the situation;
- c. proper KET personnel will be notified to assist in the emergency;
- d. the area will be evacuated if deemed necessary;
- e. proper agencies will be notified for assistance if deemed necessary;
- f. any injured person will be transported to the local acute care facility;
- g. KET clean up personnel will wear protective equipment and seal off the area;
- h. KET clean up personnel will contain the spill with absorbent material;
- i. disinfectant will be placed on the contaminated area;
- j. disinfectant will be allowed to penetrate and remain on the contaminated area for a period of time;
- k. spill pillows will be placed in double bagged containers and packaged in the same manner as other medical waste and transported for disposal;
- l. the area will be re-disinfected;
- m. cultures of the area will be taken if deemed necessary;
- n. the Washington State Department of Ecology and the County Health Department will be notified if deemed necessary;
- o. containment supplies will be replenished.

#### INTERNAL NOTIFICATION

Internal notification will be conducted by the administrator or his designee. Those to be notified will be contacted by phone, hand-held radio, or cellular phone.

#### CONTAINMENT and CONTROL

##### SPILL FROM a SINGLE CONTAINER

Spills from a single container will be handled as described in section titled minor incidents.

##### DECONTAMINATION

The administrator or his designee will supervise the decontamination of all areas affected by infectious waste spills. In general, the spill area will be liberally flooded with a 10 percent bleach solution. This solution will be allowed to remain in contact with the contaminated area for a minimum of (30) thirty minutes. The liquid will then be removed using absorbent pillows or paper and the process will be repeated. All articles used in the decontamination process (i.e., spill pillows, absorbent paper, protective clothing, etc.) will be packed and disposed of in the same manner as infectious waste.

##### CLEAN UP of RESIDUES and DISPOSAL

The clean up of residues will occur in the same manner as spills. Non-disposable items will be properly disinfected (see Decontamination). Disposable items will be disposed of in the same manner as the infectious waste.

##### POST EMERGENCY PROCEDURE

Post emergency procedures will include an evaluation of the incident. It will identify factors that caused the incident, such as if the accident occurred due to personal neglect

or through unsafe circumstances present in the workers' environment. A log of all incidents will be kept on file and a yearly evaluation will be conducted to pinpoint any similarities which may be occurring. If such similarities occur, appropriate training will be provided to eliminate those circumstances which are causing the accidents.

#### SAFETY MEASURES

- A. Materials for the safe handling of spills will be kept close at hand in any area where medical waste may be located.
  - 1. Infectious materials clothing, including goggles, mask, coveralls, gloves, and foot covers;
  - 2. Sufficient amount of absorbent to contain at least ten (10) gallons of liquid;
  - 3. Spray bottles of bacteriocidal compounds;
  - 4. Employees will be trained in the safe handling of infectious materials and will be made aware of the hazards involved. They will be instructed to report any accident or injury that occurs.

#### TRANSPORTING MEDICAL WASTE

KET staff persons who transport medical waste that has not been treated shall comply with the following:

- 1. KET shall not accept waste which is improperly packaged
- 2. Medical waste shall be handled and transported in a manner that prevents leakage of the transport container
- 3. The integrity of the package shall be maintained at all times
- 4. The labeling and marking of the package shall be maintained at all times
- 5. All loads containing medial waste shall be transported in a closed cargo container
- 6. Prior to transporting a load of medical waste and after loading medical waste onto the vehicle the driver shall placard the vehicle so as to display the international biohazard symbol on the vehicle, in accordance with 49 CFR §172.323
- 7. All medical waste shall be transported to a permitted storage or treatment facility. Every effort shall be made to transport waste for treatment/disposal within seven calendar days of the date of shipment from the generator
- 8. Refrigeration at an ambient temperature between 35 and 45 degrees Fahrenheit shall be maintained for Regulated medical waste that will not be delivered for treatment within seven calendar days.
- 9. Vehicles used for the transportation of medical waste shall be thoroughly cleaned and disinfected before being used for any other purpose and in the event of leakage from packages
- 10. While transporting medical waste, vehicles are prohibited from transporting any material other than solid waste and supplies related to the handling of medical waste

NOTE: This document shall be viewed as a living document and shall be subject to change. Language found within this document shall be changed from time-to-time to reflect change in regulation, procedures, or turnover in key personnel.

The following are adopted by reference or otherwise:

WAC 480-70-041

WAC 480-70-436

WAC 480-70-451

WAC 480-70-466

WAC 480-70-471

49 CFR §172.200 through §172.205

49 CFR §172.323

49 CFR §173.134

Proposed:

MEDICAL WASTE OPERATING PROCEDURES DRAFTED BY ALLEN McCLOSKEY  
& IMPLEMENTED BY DARIN PEROLLA

EXHIBIT RLO-IT

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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 ROBERT L.  
OLSON

I, Robert L. Olson, 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:

WITNESS

I am the President and General Manager, and a shareholder, of Kleen Environmental Technologies, Inc. As President and General Manager, my duties include financial management, business development, quality assurance, and project management. I am actively involved in project design and implementation for various industrial, and private remediation sites and services. I have been with Kleen for twelve years, since its origin, and have held the positions of President and General Manager for all twelve years.

I have been a General Manager in the environmental industry in the Northwest for more than 26 years and have experience in the following areas:

1 OSHA/WISHA 40-hour HAZWOPER  
2 Confined Space Entry (Authorized Entrant/Attendant)  
3 Oregon State Soil Matrix  
4 Underground Storage Tank Decommissioner  
5 Compressed gas cylinder management  
6 Emergency Response  
7 Clandestine drug labs  
8 Indoor air quality-Mold

9 I have a Bachelors Degree from Kent State University (1964)

10 **KLEEN ENVIRONMENTAL TECHNOLOGIES, INC.**

11 Since 1993, Kleen has provided environmental services to clients throughout the Pacific  
12 Northwest including, Washington, Oregon, and California. Kleen is a specialty environmental  
13 contractor and consulting firm offering expertise and services in facility decontamination,  
14 environmental site assessments, emergency response services, hazardous waste management,  
15 lead abatement, industrial hygiene and underground storage tank (UST) decommissioning.

16 Kleen specializes in the following services:

17 Site Assessment and Remediation  
18 Hazardous Waste Management / Chemical Lab Packing  
19 Industrial Compliance/Resource Planning  
20 Liability Management Programs  
21 Chemical Release Emergency Response  
22 Facility Decontamination  
Environmental Management Software Systems  
Health Care Facility Compliance  
Clandestine Drug Lab Decontamination

Kleen provides its environmental services to a large array of types of clients, including  
medical, biotech, educational facilities, federal and municipal government, manufacturing,  
engineering and environmental. Kleen has earned a reputation within the environmental  
community as a problem solver and we pride ourselves on tackling and resolving difficult issues



1 involving hazardous materials. Kleen is accustomed to complying with the ordinances, rules,  
2 regulations, and other laws pertaining to the handling of hazardous materials, including without  
3 limitation packaging and facilitated transportation of hazardous waste in compliance with 49  
4 CFR Parts 173-189, and compliance with Federal Motor Carrier Safety Administration  
5 regulations.

6 True and correct copies of our certifications from the Washington Utilities and  
7 Transportation Commission (Interstate Registration of U.S. Department of Transportation  
8 Number 1174694), U.S. Department of Transportation Federal Motor Carrier Safety  
9 Administration (MC-471089-P) and Hazardous Materials Certificate of Registration (060404  
10 001 039M) are attached as Exhibits A-C.

11 A more complete description of the current services of Kleen can be found in our  
12 promotional materials, true and exact copies of which are attached as Exhibits D-L.

13 During the past 12 years Kleen has developed a track record of success. We have had  
14 one minor citation and have otherwise complied with all applicable rules and regulations. We  
15 have provided our services to some of Washington's largest pharmaceutical and bio-research  
16 companies and some of Washington's largest healthcare facilities. Because of our past success  
17 in handling hazardous materials, and because many of our current clients include several  
18 biomedical waste generators, e.g., hospitals, pharmacies, dentists, clinics and others, we been  
19 asked by several of these clients to handle their biomedical waste as well. Based on industry  
20 response and our experience in handling hazardous materials and our history of regulatory  
21 compliance we foresee this as a worthwhile endeavor.

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DATED this \_\_\_\_\_ day of August, 2004, at \_\_\_\_\_.

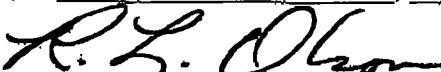
  
Robert L. Olson



EXHIBIT RLO-2  
(A)

STATE OF WASHINGTON

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

1300 S. Evergreen Park Dr. S.W., P.O. Box 47250 • Olympia, Washington 98504-7250  
(360) 664-1160 • TTY (360) 586-3203

Questions regarding this receipt, call (360) 664-1222.

INTERSTATE REGISTRATION RECEIPT - FORM RS-3

Effective: 02-05-2004 Expires: 12-31-2004

Utilities and Transportation Commission  
1300 S Evergreen Park Drive SW  
PO Box 47250  
Olympia, WA 98504-7250  
Telephone: (360) 664-1222

Serial No: 04-13715-5609

In accordance with Public Law 102-240, this receipt, evidencing registration of ICC authority, must be carried in the cab of the vehicle and may not be altered. Alteration will result in confiscation and penalties.

This receipt authorizes this motor carrier to operate in the following states:

\*\*\*WA(1)\*\*\*

US DOT NUMBER: 1174694  
MC471089  
KLEEN ENVIRONMENT TECHNOLOGIES, INC.  
754 GARFIELD STREET  
SEATTLE, WA 97109

KLEEN ENVIRONMENT TECHNOLOGIES, INC.  
754 GARFIELD STREET  
SEATTLE, WA 97109

EXHIBIT RLO-3  
(B)



U.S. Department of Transportation  
Federal Motor Carrier Safety Administration

400 7th Street SW  
Washington, DC 20590

**SERVICE DATE**  
December 11, 2003

**PERMIT**  
**MC-471089-P**  
**KLEEN ENVIRONMENTAL TECHNOLOGIES, INC**  
**SEATTLE, WA**

This Permit is evidence of the carrier's authority to engage in transportation as a **contract carrier of property (except household goods)** by motor vehicle in interstate or foreign commerce.

This authority will be effective as long as the carrier maintains compliance with the requirements pertaining to insurance coverage for the protection of the public (49 CFR 387) and the designation of agents upon whom process may be served (49 CFR 366). Failure to maintain compliance will constitute sufficient grounds for revocation of this authority.

Service must be performed under a continuing agreement with one or more persons.

Angeli Sebastian, Chief  
Information Systems Division

**NOTE:** Willful and persistent noncompliance with applicable safety fitness regulations as evidenced by a DOT safety fitness rating of "Unsatisfactory" or by other indicators, could result in a proceeding requiring the holder of this certificate or permit to show cause why this authority should not be suspended or revoked.

PMO

EXHIBIT BLO-4  
(c)

**UNITED STATES OF AMERICA  
DEPARTMENT OF TRANSPORTATION  
RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION**



**HAZARDOUS MATERIALS  
CERTIFICATE OF REGISTRATION  
FOR REGISTRATION YEAR(S) 2004-2005**

**Registrant:** KLEEN ENVIRONMENTAL TECHNOLOGIES INC  
Attn: ROBERT L OLSON  
754 GARFIELD STREET  
SEATTLE, WA 98109

This certifies that the registrant is registered with the U.S. Department of Transportation as required by 49 CFR Part 107, Subpart G.

This certificate is issued under the authority of 49 U.S.C. 5108. It is unlawful to alter or falsify this document.

**Reg. No:** 060404 001 039M      **Issued:** 06/07/2004      **Expires:** 06/30/2005  
**Reissued:** 07/06/2004

**Record Keeping Requirements for the Registration Program**

The following must be maintained at the principal place of business for a period of three years from the date of issuance of this Certificate of Registration:

- (1) A copy of the registration statement filed with RSPA; and
- (2) This Certificate of Registration

Each person subject to the registration requirement must furnish that person's Certificate of Registration (or a copy) and all other records and information pertaining to the information contained in the registration statement to an authorized representative or special agent of the U. S. Department of Transportation upon request.

Each motor carrier (private or for-hire) and each vessel operator subject to the registration requirement must keep a copy of the current Certificate of Registration or another document bearing the registration number identified as the "U.S. DOT Hazmat Reg. No." in each truck and truck tractor or vessel (trailers and semi-trailers not included) used to transport hazardous materials subject to the registration requirement. The Certificate of Registration or document bearing the registration number must be made available, upon request, to enforcement personnel.

For information, contact the Hazardous Materials Registration Manager, DHM-80 Research and Special Programs Administration, U.S. Department of Transportation, 400 Seventh Street, SW, Washington, DC 20590, telephone (202) 366-4109.

## Health and Safety Management Function Specific Training

A safe working environment is of utmost importance in every project. KET develops site specific Health and Safety planning tailored to each project requirement. Function specific training offered by KET includes:

- ◆ HAZWOPER Training  
OSHA/WISHA 40 & 80 hour
- ◆ Confined Space Entry
- ◆ DOT General Awareness HM-181
- ◆ DOT 126 F.

Handling Hazardous Materials

## Health Care Industry

KET offers an array of programs that assist health care facilities in maintaining a high standard of environmental compliance. Such programs comply with criteria established under ICAHO Guidelines:

- ◆ Chemical Materials Management
- ◆ MSDS Access and Reporting
- ◆ Human Resource Management
- ◆ Waste Management/Tracking
- ◆ Air Management (Form R)
- ◆ Environmental Health & Safety
- ◆ Facility Management

# Kleen Environmental Technologies, Inc.

An Environmental Service Group

### Specializing in:

- Hazardous Waste Management
- Chemical Lab Packing
- Regulatory Compliance
- Site Assessment and Remediation
- UST Decommissioning
- Abrasive Sand recycling
- HAZWOPER/USDOT Training
- Waste Tracking Software
- Tank Cleaning
- Facility Decontamination
- Health Care Facility Compliance



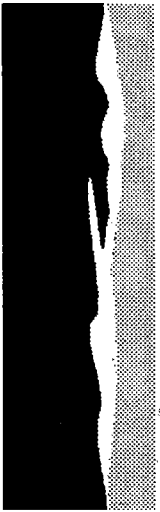
**Creating Solutions  
for Industry**

EXHIBIT RLO-5  
(6)

*Kleen Environmental Technologies, Inc*  
754 Garfield Street  
Seattle, WA 98109

Phone (206) 285-8010  
Fax (206) 285-9646

## Hazardous Waste Management



Kleen Environmental Technologies (KET) offers comprehensive waste management services including waste characterization and project regulatory support. Hazardous waste services include:

- Sampling and Analysis
- Characterization/Designation
- Unknown Chemical Identification
- Waste Transportation
- Approved and Permitted Disposal
- Complete Lab Pack Services

As your environmental service provider, KET reviews and offers all applicable disposal/treatment options, so the one you choose is best for your company. In support of waste management activities KET provides containers, labels and documents to ensure compliance in managing your waste.

KET personnel have over 75 years of combined experience in the environmental industry, demonstrating expertise in all areas of regulatory compliance and waste minimization.

## Site Assessment & Remediation

KET offers an array of site assessment and remedial services.

- Phase I and II Property Assessments  
ASTM Standards Referenced
- Due Diligence
- Sample/Work Plan Development
- Remedial Investigation
- Site Characterization and Remediation
- UST & LUST Services
- Matrix Screening
- Fate and Transport Modeling

KET interfaces with federal, state and local regulatory agencies during all phases of site assessment work, ensuring all policies and procedures are in compliance with applicable guidelines



As many companies continue to streamline operations and increase efficiency, Waste reduction, processing and recycling become relevant cost-saving issues. KET offers a range of auditing services that includes:

- Regulatory Compliance
- Waste Management
- Industrial Hygiene/Health & Safety
- Waste & Wastewater Processing
- Pollution Prevention Planning

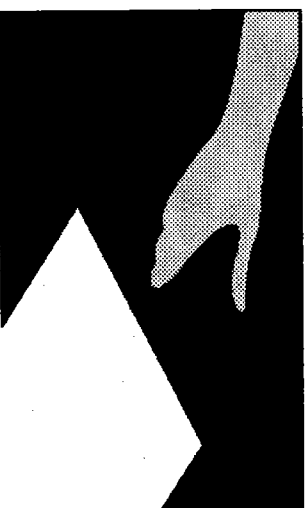
KET provides clients with audit information on facilities processing contaminated materials and hazardous waste, ensuring conformity with mandated standards.

## Resource Planning

Reviewing facility operations and processes often identifies discarded or spent materials and products treated as solid wastes. In many cases these materials may be recycled or otherwise beneficially reused. KET develops site/project specific Best Management Practice Programs (BMPs) that address beneficial reuse. Such management programs are developed and provided in accordance with:

- Washington, WAC 173-303
- Oregon, OAR 340
- California, Title 22

KET has currently developed beneficial reuse programs for the sandblasting and coatings industry. KET endeavors to offer a comprehensive materials management program that is tenable to generators, regulators and end users alike.

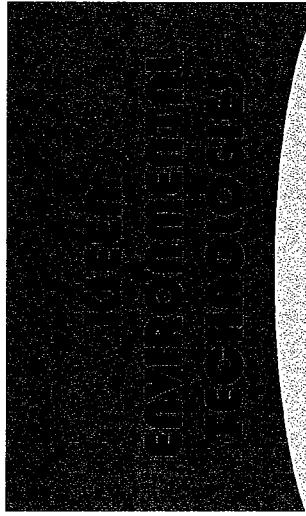


*Kleen  
Personnel have  
over 50 years  
of combined  
hazardous waste  
and  
environmental  
service experience  
to meet any of your  
hazardous waste  
and disposal  
needs.*

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Seattle, WA  
Permit No. 2329



**Kleen Environmental Technologies**  
754 Garfield Street  
Seattle, WA 98109



24-HOUR ON-CALL EMERGENCY SERVICE



**Kleen Environmental Technologies**

754 Garfield Street – Seattle, WA 98109

**Telephone: (206) 285-8010**

FAX: (206) 285-9646

Toll Free: 1-800-916-1240

Web Page:

<http://www.kleenenvironmental.com>

Email: [kleenet@isomedia.com](mailto:kleenet@isomedia.com)

EXHIBIT RLO-6

(E)



## **Federal, State and County Hazardous Waste Compliance**

County and State Regulatory Agencies are requiring dental practitioners to comply with Federal and State hazardous waste regulations.

**WAC 173-303**

Washington State Regulations require that hazardous wastes generated by dental practitioners must be managed in accordance with developed procedures and guidelines. With compliance comes a degree of paperwork and extra labor hours for your business.

**Kleen Environmental Technologies, Inc.** is prepared to assist you in these issues and service your office's proper waste disposal needs. With a turnkey service, **Kleen Environmental Technologies** will provide the following:

- **Completion of all the necessary and regulatory paperwork required to meet federal, state and county procedures, guidelines and regulations**
- **Maintain waste profiles**
- **Packaging and storage materials for hazardous wastes**
- **Manifesting and transportation to a licensed disposal facility**

## **HAZARDOUS MATERIALS**

**Kleen Environmental Technologies** will manage your hazardous wastes to include:

- **X-Ray Fixer**
- **Mercury Amalgam**
- **Lead Foils**
- **Sterilizing Solutions**

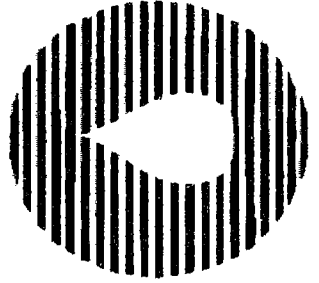
**Kleen Environmental Technologies** can also manage your fluorescent light tubes and a variety of batteries.

With pick-ups normally scheduled on a quarterly basis, **Kleen Environmental Technologies** can dispose of all the aforementioned wastes for:

**About \$1.68 per day!**

Disposal costs will vary with individual shipments.

### **Kleen Environmental Technologies**



## **Program Cost Material Disposal Costs**

The following services are included in the disposal prices:

**Administration** (includes all paperwork — bill of lading, manifest, reports — so wastes can be picked-up)

**Waste Pickup** (includes HazTech time, truck for pickup of wastes and delivery of replacement containers)

**Transportation** (transport to disposal facility — includes time for HazTech to deliver all wastes to licensed disposal facility)

Since all dental practitioners have different disposal needs, the following list includes the most common wastes handled by **Kleen Environmental Technologies**. Disposal Costs vary according to waste volume:

- **Fixer \$40**
- **Lead \$35**
- **Amalgam \$95**
- **Alcohol-based Sterilizing Solutions \$100**
- **Fluorescent bulbs \$0.12/lineal foot**
- **Batteries as universal waste**

**OUTSIDE THE GREATER SEATTLE AREA**  
(North of Everett, East of Issaquah and South of Tacoma)

Prices will vary depending upon distance traveled. Disposal fees, transportation to facility fees and office administration costs will remain the same.

### **DISPOSAL SCHEDULING**

Disposal schedules can be determined as you or your staff directs on a quarterly or semi-annual basis.

### **SPECIAL PRICE QUOTE**

Call us today and provide particulars of your specific requirements. We will be pleased to provide a no obligation price quote for a program based on your needs.

# Kleen Environmental Technologies Inc. (KET)

## CREATING SOLUTIONS FOR INDUSTRY

From medical to biotech, educational facilities, federal and municipal government, manufacturing, to engineering and environmental, KET offers a large array of environmental services to meet your needs. KET has earned a reputation within the environmental community as a problem solver and we pride ourselves on tackling and resolving difficult issues. KET is a full-service, environmental contractor offering waste management and a complement of ancillary environmental services.

KET manages regulated solid and hazardous waste through EPA and Washington State permitted facilities. KET environmental specialists routinely educate clients on Best Determined Applicable Technology (BDAT) for comprehensive waste management Issues. KET provides services for:

### Education Institutions

Universities  
High Schools  
Trade Schools  
Alternative Learning Centers

### Hospitals/Biotech

Hospitals  
Pharmaceutical  
Medical Clinics  
Biotech

### KET Specializes in:

Site Assessment and Remediation  
Hazardous Waste Management and Chemical Lab Packing  
Industrial Compliance and Resource Planning  
Liability Management Programs  
Chemical Release Emergency Response  
Facility Decontamination  
Provider of Environmental Management Software Systems  
Health Care Facility Compliance  
Clandestine Drug Lab Decontamination

### Engineering

Soil/Groundwater Remediation  
UST/LUST Services  
Engineering Companies  
Fortune 500 Corporations

### Manufacturing/Commercial

Heavy Industrial Manufacturing  
Light Commercial Manufacturing  
Light Commercial Service  
Light and Heavy Construction



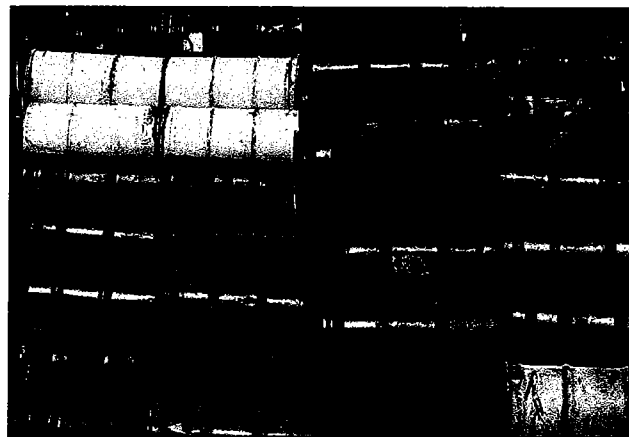
###

# Kleen Environmental Technologies Inc. (KET)

## HAZARDOUS WASTE MANAGEMENT

### Hazardous Waste Management

- Waste Sampling and Analysis
- Waste Characterization/Designation
- Unknown Chemical Identification
- Waste Transportation
- Approved and Permitted Disposal
- Complete Lab-Pack Services
- Facility Audit Services
- Ancillary Supplies and Materials



In support of corporate management and pollution prevention planning, KET's services include a broad range of auditing services that include regulatory compliance, comprehensive waste management, industrial hygiene, health and safety, and recycling. As many companies continue to streamline operations and increase efficiency, waste reduction and recycling become relevant cost saving issues. Kleen Environmental Technologies regularly interfaces with federal, state and local regulating agencies governing all phases of site assessment work, ensuring all policies and procedures are in compliance with existing and revised applicable guidelines.

### Liability Management Programs

- Emergency Response—First and Secondary Responders
- Health and Safety Planning
- HAZWOPER Training (OSHA/WISHA 40/80 hour course)
- HAZWOPER Update (8-hour refresher)
- Confined Space Entry/Lock Out-Tag Out
- USDOT General Awareness HM181
- USDOT 126F, Handling Hazardous Waste

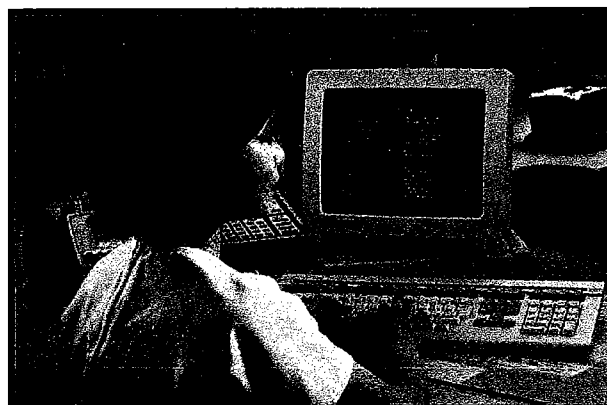


Specialty courses are designed and available to the customer's requests.

## ServiceTrax Linx Waste Management Software (WMS)

WMS is the primary field service program for KET's field teams. This program enables KET to maintain an update database/inventory of our clients' chemicals. Each field team generates labels, manifest, profile, and reports at the customer's. This system provides KET with the most advanced environmental software technology available incorporating the following areas:

- Lab-Pack System Information
- Waste Management and Tracking
- Air Management (Form R)
- Bar-coding and Labeling
- MSDS Access and Reporting
- EPA Forms IC, OI, GM
- SARA Reporting
- Manifesting



## PC Compliance and Compliance Suite, RMS Systems, Inc.

KET is a licensed distributor of RMS, PC Compliance Software. The leader in OSHA Compliance Software:

- Create powerful reports and graphs that can reveal trends, compare facilities, detail costs, and much more.
- Customize any program with user-defined custom fields to track and report data specific to your organization.
- Secure sensitive data with our multi-level password protection.
- Archive old records for quick and easy retrieval to streamline your active database.
- Avoid unnecessary data entry with our point-and-click import/export features.
- Harness the power of network and multi-facility technology to create your own enterprise-wide solution with our network and multi-facility versions.
- Switch between multiple PC compliance applications without ever leaving the program.
- Retrieve the information you need in seconds with the master list feature that allows you to view and sort records according to your specifications.

## Project Planning/Management

KET employs a multi-dimensional approach to project development and execution. Pre-project assessments generate a more effective planning approach. By evaluating short-term and long-term client objectives, KET can engender realistic expectations for project cost and required timelines for the different approaches selected. Our project planning and management approach meets, if not exceeds, the client's expectations. KET's approach is defined by:

- Pre-project Meeting
- Periodic Cost Analysis and Project Evaluation
- Plan Execution
- Post Completion Follow-up
- Debriefing on Emergent Activities

These critical elements ensure the project work performed by KET and its subcontractors conforms to the contracted scope of work and specifications.



## Treatment, Storage, and Disposal Facilities

Kleen Environmental Technologies is an industry leader in managing problem waste and hazardous waste. KET operates under contract, with regional and national Treatment, Storage, Disposal and Recycling Facilities (TSD/TSDFs) to manage wastes under the best-determined applicable technology. KET's mission is to provide cost-effective and efficient options for your waste management needs.

Emergency response circumstances may dictate removal of hazardous substances off-premises prior to adequate designation and characterization. KET has developed ER programs to characterize and generate on-site approvals to remove the material from the site for more adequate characterization. KET operates under contract with additional recycling facilities and burners of petroleum-impacted soil. These entities include:

- Clean Washington Center
  - TPS Services
  - LaFarge, Inc.
  - Lakeside Industries
  - Marine Vacuum Services
- ###

# Kleen Environmental Technologies Inc. (KET)

## DECONTAMINATION AND REMEDIATION

### Site Assessment and Remediation

- Phase I and II Property Assessment (ASTM Standard References)
- Due Diligence
- Sample/Workplan Development
- Remediation
- Site Characterization and Remediation
- UST and AST Services
- Matrix Screening
- Fate and Transport Modeling
- Chemical Release Emergency Response
- Drug Lab and Facility Decontamination
- Brownfield Recovery



### Industrial Compliance/Resource Planning

- Regulatory Compliance
- Permit Waste Minimization/Pollution Prevention
- Corrective Action Programs (MTCA, SARA, CERCLA)
- Alternative Raw Materials (ARM) Programs

KET develops and employs site/project-specific Best Management Practice (BMP) programs that address beneficial re-utilization issues. KET is teaming with several State agencies in reviewing industrial processes and methods incorporating solid wastes as raw materials in industrial applications. KET is currently developing cost-effective BMP's in accordance with applicable regulations in Washington, Oregon, Montana, and California.

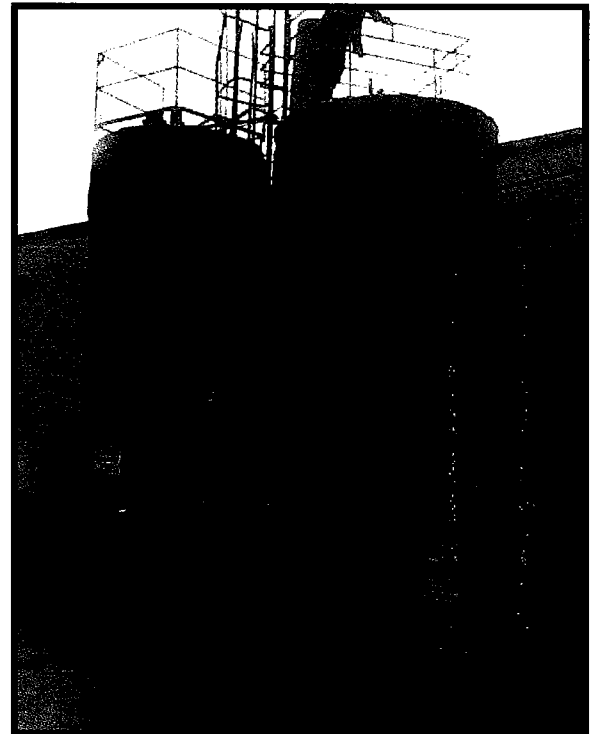
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- Clean Washington Center
- TPS Services
- LaFarge, Inc.
- Lakeside Industries
- Marine Vacuum Services



###

# Kleen Environmental Technologies Inc. (KET)

## HOSPITALS AND BIOTECHNOLOGY

Hospitals, medical clinics, pharmaceutical companies and biotechnology corporations are complex environments for organizing, directing and implementing health and safety and environmental management programs. Medical care facilities employ a vast array of autonomous disciplines with separate department heads and administrative bodies. Coordinating these departments and standardizing environmental practices can be a daunting and challenging endeavor.

One of the greatest challenges encountered by multi-disciplined organizations is the standardization of environmental and waste management programs. Most departments and administrations develop independent operating procedures and budgets, essentially decentralizing the concept of a uniform, facility-wide waste management program. Many organizations employ risk managers to address liability issues, but seldom employ experienced individuals to specifically deal with environmental regulatory issues and ensure that wastes are managed and disposed appropriately.



KET builds partnerships within the medical care and pharmaceutical communities to bridge the gap between disciplines and departments and create uniform environmental policies and procedures. KET's consultants and environmental chemists develop interdepartmental programs that integrate waste generation and management, as well as general health and safety. With growing concerns concerning indoor air quality, KET offers a full range of air quality monitoring services that address volatile organic compounds, carbon monoxide/dioxide and bioaerosols (molds and fungi). Based on published data, KET develops and implements corrective action plans for facilities impacted by indoor air quality issues.



In multi-disciplinary settings such as pharmaceutical companies and medical care facilities, regulated wastes are generated from a variety of sources. Pharmaceutical wastes for instance, are regulated by the Environmental Protection Agency as well as the State of Washington. Such wastes must be managed in accordance with these agency regulations with the appropriate documentation. Wastes are typically generated from:



- Radiology
- Pathology/Histology Laboratories
- Pharmacy Services
- Endoscopy
- Housekeeping/Environmental Services
- Engineering and Maintenance
- In-House Print Shops and Duplicating Services

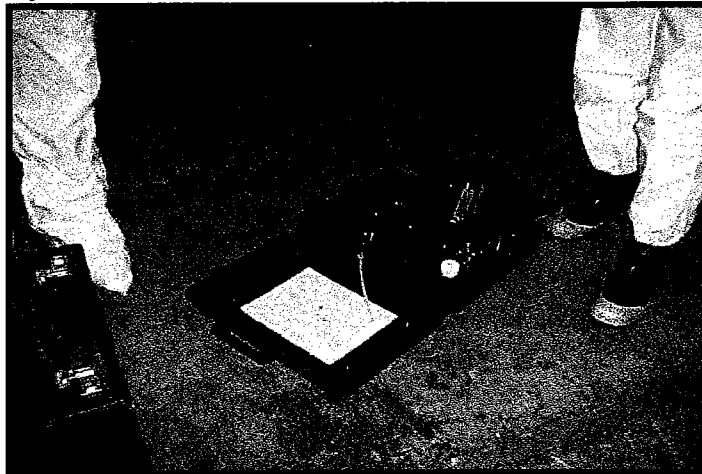
These are but a few of the areas where wastes are generated and health and safety issues are addressed. KET offers a complete array of waste management services with a staff of expertly trained environmental specialists. Hazardous waste services include the following:

- Waste and Product Sampling and Analysis
- Waste Characterization and Designation
- Unknown Chemical Identification
- Waste Transportation and Permitted Treatment and Disposal
- Complete Lab-Pack Services - KET Field Chemists are OSHA/WISHA certified and provide turnkey lab-pack services including comprehensive product inventory, segregation, packaging, transportation and disposal.
- 24-Hour Emergency Chemical Spill Response



As many organizations continue to streamline operations and increase efficiency, partnering becomes an important option. Waste reduction, processing and recycling are relevant cost-saving issues, as is a comprehensive environmental and health and safety program. KET offers a range of ancillary environmental services that include:

- Overall Regulatory Compliance Monitoring
- Industrial Hygiene/Health and Safety
- Indoor Air Quality Monitoring and Reporting
- Waste and Wastewater Processing
- Pollution Prevention Planning



A safe working environment is paramount to every institution. KET develops project specific health and safety programs for medical and pharmaceutical clientele. In many instances, such facilities select in-house staff members to participate in safety committees. In the event of a chemical release or similar emergency, these individuals act as first responders. KET provides consultation on such emergencies on a 24-hour basis and offers training in the following areas.

- Emergency Response – First Responder Training
- OSHA/WISHA 40-Hour HAZWOPER
- Confined Space Entry
- General Chemical Awareness
- DOT General Awareness HM-181
- DOT 126F, Function Specific, Handling Hazardous Materials

# Kleen Environmental Technologies Inc. (KET)

## MANUFACTURING and COMMERCIAL

Kleen Environmental Technologies, Inc. (KET) offers a variety of environmental services to the manufacturing and commercial community from pollution prevention planning and recycling programs to health and safety program development and hazardous waste management. In the course of product manufacturing, facility maintenance and construction, hazardous wastes are generated as by-products. Such materials include:



- Flammable Solvents and Fuels
- Paint and Paint-Related Materials
- Oils and Machine Coolants
- Acids and Caustics
- Adhesives and Resins
- Pesticides and Herbicides
- Reactive and Other Miscellaneous Compounds

Many commercial organizations accumulate off-specification or surplus products that can no longer be utilized for their originally intended purpose. KET develops and implements site/project-specific Best Management Practice (BMP) programs that address proper management and disposal of such materials as well as beneficial re-use in approved recycling programs. In support of waste management activities, KET provides assistance and consulting on waste-reduction, alternative materials utilization, and chemical hazards awareness. In addition to waste management KET provides ancillary support services that include the following:

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Kleen Environmental Technologies (KET)  
754 Garfield Street, Seattle, WA 98109-3005  
**TELEPHONE: (206) 285-8010 FAX: (206) 285-9646**  
Web Page: <http://www.kleenenvironmental.com>  
Email: [kleenet@isomedia.com](mailto:kleenet@isomedia.com)  
State Transporter No.: WAH000004457  
Contacts: Robert L. Olson, President

Page 1

Rev. 04/02

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DUNS: 92986-2720

SIC Codes 8742 primary; 8744 secondary

General Contractor's License: KLEENET055KA

Washington State UBI No.: 601583676

Darin C. Perrollaz, Vice President

## MANUFACTURING and COMMERCIAL, continued ...

- Underground Storage Tank Decommissioning and Remediation
- 24-Hour Emergency Response – First and Secondary Responder
- Health and safety Planning – Chemical Hygiene
- Lab-Pack System Information
- Comprehensive Waste Management and Tracking
- Tier 1 and Tier Reporting; Form R Toxic Release Inventory
- Form 5 Completion – Dangerous Waste Reporting; EPA forms IC, OI, GM

KET's goal is to provide the most efficient and cost-effective methods of waste management and minimization for our clients. KET provides comprehensive audit data on disposal facilities and long-term liability management. Hazardous waste and environmental management requires extensive training on health and safety-related issues. KET regularly coordinates with State Labor and Industry representatives on exposure-related issues.

KET is a Washington State Licensed Clandestine Drug Lab Decontamination Contractor, operating under the authority of the Washington State Department of Public Health. Illegal methamphetamine laboratories have become a major issue for property management and real estate agencies as there has been an exponential growth in the number of labs "busted" over the past 5 years. Lending institutions and property management firms become responsible parties for decontamination and cleanup of such facilities. KET offers a high level of competency and expertise in the decontamination of clandestine drug lab facilities. KET field chemists and supervisors regularly participate on the State's Clandestine Drug Lab Steering Committee and have been featured in the Seattle Times and Environmental Health Perspectives, a scientific journal on environmental studies.

KET maintains a three million dollar aggregate contractors' professional liability policy inclusive of professional errors and omissions coverage. Specific project references are available upon request. To this end, KET maintains a high degree of confidentiality pertaining to dangerous waste and emergency response activities.

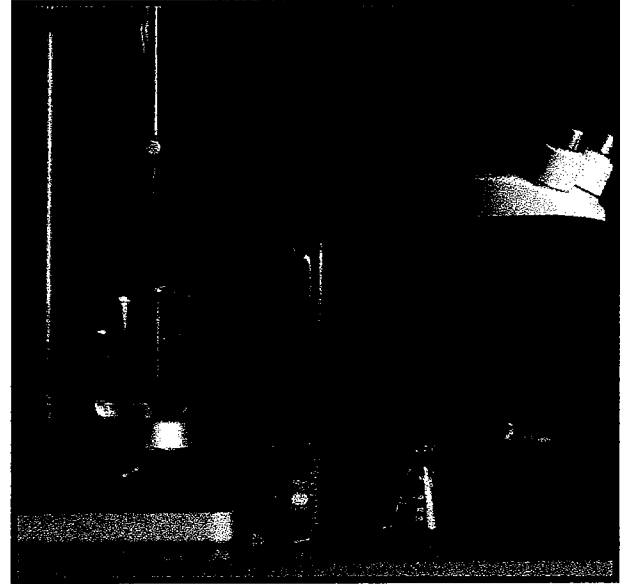
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# Kleen Environmental Technologies Inc. (KET)

## WASTE TYPES

### Hazardous Waste Management

- Flammable and Combustible Liquids
- Compressed Gas Cylinders: Toxic, Flammable
- Flammable Solids
- Oxidizers
- Organic Peroxides
- Pesticides/Herbicides
- Corrosive Liquids and Solids
- Metalworking Fluids
- Laboratory Chemicals
- Reactive Compounds
- Regulated and Non-Regulated Wastewater
- Petroleum-Impacted Soil
- Contaminated and Off-Spec Oil



### Universal Waste Management

- Fluorescent Light Tubes
- PCB and Non-PCB Light Ballasts
- Mercury in Manufactured Articles
- Alkaline Dry-Cell Batteries
- NiCad Batteries
- Lead/Acid Batteries
- Silver Oxide Batteries
- Lithium Hydride Batteries
- Nickel Hydride Batteries



###

# Kleen Environmental Technologies Inc. (KET)

## ENGINEERING

Kleen Environmental Technologies, Inc. (KET) is a locally owned and regionally operated environmental service group headquartered in Seattle, Washington. KET offers environmental remediation and waste management services to a diverse group of engineering companies. KET utilizes a multi-dimensional approach to address tasks and issues. Pre-project assessments generate a more effective planning approach. By evaluating short-term and long-term objectives of clients, KET can engender realistic expectations of costs incurred for the different approaches selected.



Our project planning and site management experience includes managing large- and small-scale projects for a diverse client base. Our planning approach has met or exceeded the goals of our most demanding clients. KET's approach is defined by:

- Pre-project planning
- Periodic cost analysis and evaluation for project direction
- Plan execution
- Follow-up on projects with cost completion analysis
- Debriefing on emergent activities

## Waste Management

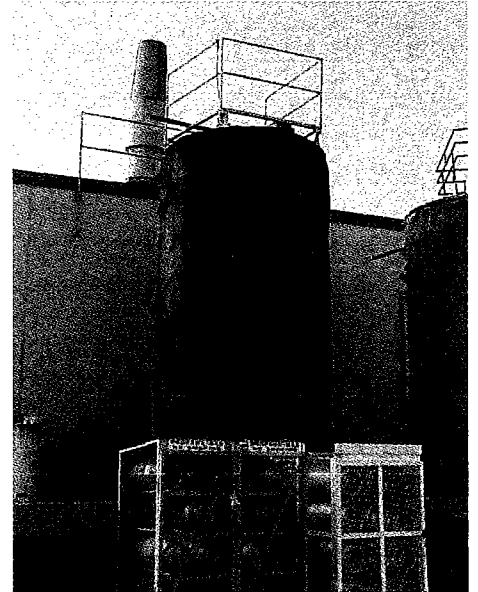
KET offers timely and dependable services tailored to meet individual project needs. KET offers comprehensive waste management services that incorporate waste characterization and regulatory support. Services offered include:

## Kleen Environmental Technologies (KET) continued ...

- Product Sampling and Analysis
- Waste Characterization and Designation
- Unknown Chemical Identification
- Waste Transportation
- Approved and Permitted Disposal
- Complete Lab-Pack Services
- 24-Hour Emergency Spill Response

## Remediation

As a comprehensive environmental service provider, KET reviews and offers applicable remediation options that incorporate disposal and treatment of contaminated media. KET field chemists ensure compliance with all applicable federal, state and local regulations during the remediation, removal and disposal phase of each project. KET's remediation services include:



- Characterization and Management of Investigationally Derived Waste (IDW)
- Characterization and Management of Contaminated Media to Include Groundwater, Soil and Product
- Underground Storage Tank Removal and Decommissioning (UST/LUST Sites)
- Phase I and II Real Property Assessments; ASTM Standards Referenced
- Sample and Workplan Development
- Clandestine Drug Lab Decontamination and Reporting
- Matrix Screening
- Industrial Hygiene/Health and Safety Planning
- Pollution Prevention Planning

KET interfaces with federal, state and local regulating agencies during all phases of site work, ensuring work practices and management issues are in compliance with applicable regulations and guidelines.

###

**EXHIBIT AM-IT**

**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 ALLEN  
MCCLOSKEY**

I, Allen McCloskey, 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 a Development Consultant to Kleen Environmental Technologies, Inc. My duties include overseeing this application before the Washington Utilities and Transportation Commission to secure a Certificate of Public Need and Necessity. If the certificate is granted, I will be responsible for the oversight and implementation of the services provided pursuant to that certificate, and provide consultation on how to offer the services in a manner that compliments our existing corporate structure. I have worked with Kleen for 18 months.

I was formerly an active Development Manager for McCloskey Enterprises and in my capacity as such, designed and implemented countless development strategies for various companies.

I have a Bachelors Degree in Business Administration Humbolt State (1993).



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## PROPOSED SERVICE

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It is the intention of Kleen to treat biomedical waste with the same disciplines, due-diligence, and caution that we exercise in relation to RCRA waste. We are dedicated to providing each of our clients with superior quality service through understanding their needs and total commitment to their success. Our commitment to creating solutions for industries is efficient, cost-effective, and accomplished in a professional manner. It is our ultimate goal to provide value-added services directly supporting our clients' ability to remain competitive in today's world market.

20  
21  
22

Kleen is proposing to offer a full service waste management service, not just your traditional curb side pick-up service. We will offer clients a closer disposal facility for incineration (Utah v. Brooks, Oregon) and an additional method of disposal called hydroclave, a method and technology not offered by any other transporter. We will offer an online interactive generator profile system that will allow generators to review various documents associated with their waste, e.g., manifests, certificates of destruction, invoices, weight tickets, and any other documents associated with the transporting and disposal of their waste, a service not offered by any other transporter. We are proposing to be a full service waste management group for Washington State generators, a service not offered by any other generator. We can offer our existing services with our proposed services to allow savings and preservation of resources for our clients.

The existing service providers offer services very similar to curb site pick-up. We are going to be offering a full service waste management approach. We will offer the generator the opportunity to consolidate their waste disposal needs. Our services related to biomedical waste

1 will be just one piece of the total waste management plan designed by our staff. Clients will be  
2 encouraged to utilize Kleen for all their waste management needs so as to cut administrative  
3 costs associated with the various wastes. We will also be offering an additional method of  
4 disposal not currently offered by existing providers, i.e., Hydroclave. Our online user profiles  
5 will be an additional service not offered by existing providers.

6 We are confident generators of biomedical waste will prefer our service because: we can  
7 be more cost effective for them, including through consolidation of services; we can provide  
8 them with more user friendly tracking systems and online profiles; we can better provide them  
9 with Certificates of Destruction and manifests to identify waste destruction; and because of our  
10 history of doing other business with them and the favorable sentiment in the industry towards  
11 us.

## 12 CUSTOMERS

13 We plan to offer our service to any generator of biomedical waste in the state of  
14 Washington, including but not limited to hospital and healthcare facilities, clinics, doctor  
15 offices, dental offices, etc. The number of these clients are reflected in our projections attached  
16 in spreadsheet format including volume/quantity.

## 17 WASTE TYPES

18 If granted the application sought, Kleen will accept all types of biomedical waste,  
19 including without limitation pathological, softs, pharmaceuticals, residual  
20 cytotoxic/chemotherapy waste, sharps, cultures and stocks, laboratory waste, animal carcasses  
21 that weigh less than 65 pounds, and anatomical parts that emanate from procedures other than:  
22 surgery, obstetrics, autopsies and laboratories. It is our understanding that specifically excluded

1 from the definition of medical waste are any RCRA-designated waste, animal carcasses larger  
2 than 65 pounds, and the previously listed anatomical parts.

3 Dental clients generate less medical waste and more hazardous waste, e.g., X-Ray fixer,  
4 lead foils, dental amalgam, alcohol solutions, developer solutions, gluteraldehyde. Generally, a  
5 majority of waste generated by dental offices is transported for recycle/reclamation and will be  
6 transported under Kleen's common carrier permit (CC-61426). Those wastes taken for disposal  
7 will either be shipped by FedEx or transportation will be contracted out.

### 8 COLLECTION

9 For the sake of developing conservative projections we estimate pick-up service for most  
10 generators to be conducted once per week. However, there will be exceptions who will generate  
11 waste at a level that only requires monthly or on call service. We would like to have all pick-ups  
12 take place according to a route schedule but will offer on-call service. If at all possible pick-up  
13 for on call service will be worked into planned pick-up routes.

1 We have broken the state into four (4) Regions as follows:

2 <u>Region One</u>	<u>Region Two</u>	<u>Region Three</u>	<u>Region Four</u>
3 Pierce County	Clallam County	Okanogan County	Ferry County
King County	Jefferson County	Chelan County	Stevens County
4 Snohomish County	Kitsap County	Douglas County	Pend Oreille County
Skagit County	Grays Harbor County	Kittitas County	Lincoln County
5 Whatcom County	Mason County	Grant County	Spokane County
	Thurston County	Yakima County	Adams County
	6 Pacific County	Benton County	Whitman County
	Lewis County	Klickitat County	Franklin County
	7 Wahkiakum County		Walla Walla County
	Cowlitz County		Columbia County
	8 Clark County		Garfield County
	Skamania County		Asotin County

9 We would prefer to conduct routes and pick-ups once per week. For example if you look  
10 at projections/analysis for region one with four clients each generating 15 units per week by the  
11 end of the month we have a truck load ready for disposal. As things progress throughout the year  
12 we will see our routes and transportation for disposal increasing.

13 Routes will differ based on the number of generators and the quantity of waste being  
14 generated. Routes are based on full truck load of 260 units per load. We would ideally like to  
15 conduct routes in such a manner that would fill a truck and allow a driver to transport directly  
16 for disposal, which allows us to minimize travel associated with back tracking to Kleen.

17 By the end of year one, we will have 2.5 drivers and one administrator employed for this  
18 endeavor. Each driver will be responsible for all matters directly related to the moving and  
19 handling of a box of biomedical waste. Two drivers will work full time on biomedical waste.  
20 Another driver will spend ½ his or her time on biomedical waste and the other time on existing  
21 hazardous waste operations.  
22

1 We will start with two 27 foot vans leased to collect and transport the biomedical waste.  
2 We will need to secure DOT, FMCSA, WUTC, and other regulatory certificates and  
3 registrations for these vehicles, as well as county certifications. We don't anticipate using these  
4 vehicles for transporting anything other than biomedical waste and materials and boxes used in  
5 the service being sought in this application. The vehicles will be in communication with us by  
6 two-way radio and cellular telephone. The vehicles will be kept in closed storage yards, secured  
7 and only accessible to authorized personnel. The vehicles will be maintained according to  
8 manufacturers recommendations. Vehicle maintenance and inspection logs will be maintained in  
9 accordance with the Federal Highway Administration U.S. Department of Transportation.

10 Each container of waste picked up by Kleen will be re-examined and hand-loaded by a  
11 certified operator, onto a Kleen truck and prepared for final transport. Each container will be  
12 scanned and entered into an electronic tracking system, at which time the manifest will be  
13 updated and uploaded to an online generator profile, ready for perusal by a generator  
14 representative.

#### 15 PACKAGING

16 Each container will be labeled with a bar-code, scanned into our electronic tracking  
17 system and uploaded to each client's personalized online generator dashboard/profile and  
18 electronically tracked from pick-up to destruction.

#### 19 STORAGE

20 Upon completion of on-site collection, packaging, inspection, and confirmation of the  
21 manifest, Kleen's truck will return to our designated storage facility where the waste containers  
22 will be unloaded, weighed (weight ticket generated), and categorized. The waste will again be

1 recorded by the automated tracking system and the online generator profile will be updated and  
2 available for perusal by a generator representative. The waste will then be stored until prepared  
3 for transport for final destruction.

#### 4 DISPOSAL

5 Biomedical waste generally produced by hospitals, health-care facilities, doctors, and  
6 dentists in the course of delivering patient care will likely be transported to Covanta Energy  
7 waste-to-energy facility located in Brooks, Oregon, about five miles north of Salem and 40  
8 miles south of Portland. Attached hereto as Exhibit A is a true and correct copy of Kleen's  
9 contract for disposal at the Covanta facility.

10 Materials transported by Kleen to the Covanta facility will be completely destroyed by  
11 means of a high-heat combustion process. Our driver will personally hand load each box of  
12 waste onto a conveyor belt at the Covanta facility which will carry the waste onto a feed hopper  
13 and directly into the incinerator. Incineration converts the waste material to an inert ash that is  
14 then landfilled. This personal participation by our driver will provide our customers an added  
15 level of assurance. At the time of destruction the Covanta facility also provides our driver with  
16 a Certificate of Destruction that severs any liability associated with this waste, again for the  
17 assurance of our customers. Dependant upon the waste constituencies and the preference of the  
18 generator, the other waste will be transferred to a Hydroclave facility in Port Coquitlam, British  
19 Columbia operated by Hospital Sterilization Services, Inc. The Hydroclave process renders the  
20 waste inert so that it can be landfilled.

1 DOCUMENTATION

2 Information on each customer's pick up will be entered into a hand-held scanner,  
3 including without limitation the client identifier, the number of units, and type(s) of waste. The  
4 information can be immediately transmitted electronically to the main office by cellular  
5 technology. Electronic records will be maintained to ensure all information is available as and  
6 when required. Manifest/Certificate of Destruction data will also be maintained both  
7 electronically and in hard copy to meet Waste Management Act Regulations and current Center  
8 for Disease Control regulations codified within 42 CFR 72 and 64 FR 58022. Detailed work  
9 orders and invoices will be prepared for each generator electronically and will directly reflect  
10 that information that is uploaded to the user profiles. Invoices will be generated on a monthly  
11 basis and made available to the client electronically or sent via mail.

12 CERTIFICATION OF DESTRUCTION

13 One common concern expressed by every generator is the assurance that the waste will  
14 be properly treated and destroyed. Kleen will take great care to personally witness the  
15 destruction of the waste and produce proper documentation (see attached Exhibit B) that clearly,  
16 without question, outlines the chain-of-custody; date of pick-up; load-unload of each container;  
17 date of transport for disposal; signed off by treatment facility at point-of-delivery. Each  
18 treatment facility utilized by Kleen follows all government requirements such as biological  
19 testing of treated waste, record keeping of levels of pressure (PSI), sterilization time and  
20 temperature at final destruction.

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MARKETING

The marketing of the proposed biomedical waste service will be done in conjunction with the promotion of other existing Kleen Services. For the most part, because of the correspondence with generators during this application process and given the number of biomedical waste facilities already served by Kleen, promoting this new service should be rather easy and cost effective. Given the nature of this process many facilities are well aware of our efforts to provide this new service and are simply waiting for us to secure authority. We currently advertise in the Seattle Metro yellow pages; a true and correct copy of which is attached as Exhibit C. We also use brochures and printed materials that describe our current services. See exhibits attached to the prefiled testimony of Robert L. Olson.

INSURANCE

A true and correct copy of our insurance coverage page is attached as Exhibit D.

DATED this \_\_\_\_\_ day of August, 2004, at \_\_\_\_\_.

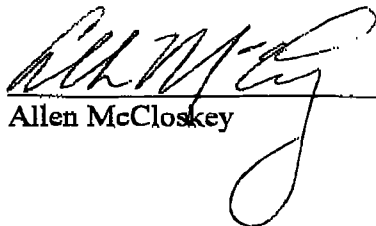
  
Allen McCloskey



EXHIBIT AM-2  
(a)**MEDICAL WASTE DISPOSAL AGREEMENT**

THIS AGREEMENT dated this 23 day of January, 2004 by and between Marion County, a political subdivision of the State of Oregon, hereinafter called County, and Kleen Environmental       , hereinafter called Hauler, provides for disposal of Medical Waste at the Marion County Solid Waste-to-Energy Facility located in Brooks, Oregon, hereinafter called WTEF.

The parties agree as follows:

1. **Definition of Medical Waste:** For purposes of this Agreement, Medical Waste shall be defined as the waste generally produced by hospitals, health-care facilities, doctor, and dentist offices in the course of delivering patient care.
2. **Excluded Waste:** Specifically excluded from the definition of Medical Waste are the following:
  - a. RCRA-designated wastes
  - b. Radioactive wastes
  - c. Anatomical parts that do not emanate from;
    - i. surgery
    - ii. obstetrical procedures
    - iii. autopsy
    - iv. laboratory procedures
  - d. Large animal carcasses over 65 pounds.
  - e. Wastes that are not permitted for acceptance by the Oregon Department of Environmental Quality.
3. **Right to deliver Medical Waste to the WTEF:** Subject to the terms and conditions set forth in this Agreement, the County hereby grants the Hauler the non-exclusive right to deliver Medical Waste to the WTEF at a rate to be determined from time to time by the County.
4. **Delivery of Medical Waste:** The Hauler agrees that the Medical Waste will be delivered to the waste-to-energy facility in vehicles which comply with state

and federal laws and regulations and the requirements of the County, including, but not limited to, the following: Delivery vehicles will not compact the Medical Waste and will be leak-proof; all waste shall be contained in impervious, plastic-lined boxes or, in the case of sharps, in boxes specifically designed for sharps; and each box shall bear the universal biological hazard symbol.

5. **Billing by County:** Incoming vehicles will be weighed on the scale at the WTEF, and the vehicle's tare weight as determined by the County will be subtracted from the scale reading to determine the weight of Medical Waste delivered to the WTEF. The County shall use this weight to calculate the billing charges for disposal. The County will bill the Hauler by the 10th of the following month. The Hauler shall pay the County within 30 days of the billing date. If payment is not received in a timely manner, the County will charge the Hauler a penalty fee of 1.25 percent of the billing, which is 15.00 percent annually. If the billing and fee are not paid within 30 days of the assessment of penalty this agreement is automatically terminated.

6. **Acceptance of Medical Waste:** A copy of the vehicle's manifest shall be presented to the County at the scales. This document shall specify the source(s) of the Medical Waste and the general contents of the vehicle. The County shall have the sole discretion to reject any vehicle, or any portion of the delivered Medical Waste, if, in the County's opinion, the waste is either not Medical Waste as defined herein, or poses an unacceptable risk to the WTEF or its personnel. In such instance, the Hauler shall immediately remove the Waste from the WTEF at the Hauler's cost and expense. Any contamination caused by such Waste by the Hauler to the WTEF shall be eliminated at the Hauler's cost and expense.

Medical Waste shall be deemed accepted by the County after it has been off-loaded by the Hauler's personnel, and after the County has reviewed the associated manifest and inspected the general condition of the shipping containers to ascertain that none is damaged or leaking.

7. **Incineration of Medical Waste:** The County will, to the best of its ability, cause through its agreement with the operator of the WTEF, to incinerate all acceptable medical waste delivered by the Hauler. If for some unforeseen circumstance the WTEF does not incinerate Medical Waste delivered by the Hauler, the County shall notify the Hauler.

8. **Delivery times:** Delivery times will be made by the County in conjunction with the operator of the WTEF. If the Hauler has not scheduled a time with the County, the Hauler's Medical Waste may be rejected by the County.

9. **Unloading of Medical Waste:** The Hauler shall be responsible for scheduling a time with the County for delivery of Medical Waste to the WTEF. The Hauler, upon arriving at the WTEF, shall use his personnel to off-load the boxed medical waste onto the conveyor at the WTEF.

10. **Consideration:** In consideration for the County agreeing to accept delivery of and to incinerate the Medical Waste delivered by the Hauler, the Hauler agrees to pay the County the current rate (inclusive of the weight of any containers) as determined at the WTEF scale.

11. **Term and Termination:** The term of this Agreement shall commence on the date of this Agreement and continue thereafter until terminated by either party. Either party may terminate this Agreement upon 30 days' written notice given in accordance with the provisions of this Agreement.

12. **Governmental Regulations:** The Hauler shall be responsible for, and agrees to comply with, all applicable local, state, and federal regulations which govern collection and transportation of solid waste inclusive of medical or infectious waste. The Hauler shall also obtain all necessary permits required in connection with collection and transportation of medical waste.

13. **Indemnification:** The Hauler hereby agrees to indemnify and hold the County and the WTEF operator harmless from any and all liability or damages resulting or arising from a failure by the Hauler to comply with its obligations under the Agreement, including the payment of attorneys' fees and costs incurred as a result of such failure. The Hauler agrees to indemnify and hold the County and the WTEF Operator harmless against any claims brought against the County or the Operator by Hauler's employees, agents, or representatives. The County hereby agrees to indemnify and hold the Hauler harmless from any and all liability or damages resulting or arising from a failure by the County to comply with its obligations under the Agreement, including the payment of attorneys' fees and costs incurred as a result of such failure.

14. **Insurance:** The Hauler shall obtain and maintain \$500,000 per each occurrence combined single limit for personal injury and property damage, for comprehensive general liability, and for auto liability insurance, or greater amount, as may be required by the County. Such insurance shall be evidenced by a Certificate of Insurance provided to the County, indicating coverages, limits, and effective dates, by an insurance company licensed to do business in the State of Oregon. Also, an endorsement shall be issued by the company showing the County as additional insured and provide that such policy shall not be

cancelled, terminated, amended, or permitted to lapse except upon not less than thirty (30) days prior written notice to that effect to the County.

15. Assignments: Neither party hereto shall assign its rights or delegate its duties under this Agreement or any part hereof without the prior written consent of the other party. Subject to the foregoing, this Agreement shall be binding upon the parties' respective successors and assigns.

16. Notices: Any notice given pursuant to this Agreement shall be in writing and deemed given when received or delivered personally, or within three days, if deposited in the U.S. mail, certified or registered mail, return receipt requested, with postage prepaid, at the address set forth below the signature of such party hereto, or at such other address as such party may designate by written communication to the other party in accordance with this Agreement.

IN WITNESS THEREOF, the parties hereto have executed this Agreement on the 13 day of January, 2004.

Hauler

Marion County

By: R.L. Olson

By: Jeff Burdell  
Title: Jr. Environmental Eng

Title: President

Title: Jr. Environmental Eng

Address:

Address:

Kleen Environmental Tech. Inc.

Marion County

754 Garfield Street

Department of Public Works

Seattle, Washington 98109

5155 Silverton Rd. NE

Phone: 206-285-8010

Salem, OR 97305-3802

503-588-5169

Fax: 206-285-9646

503.588.7970

EXHIBIT AM-3  
(B)

CERTIFICATION NO.  
00398405

309 AMERICAN CIRCLE EL DORADO, AR 71730

INVOICE NO.  
468194

CERTIFICATE OF TREATMENT/DISPOSAL

KLEEN ENVIRONMENTAL TECH., INC  
ATTN: DARIN PERROLLAZ  
754 GARFIELD ST.  
SEATTLE, WA 98109

BOTHELL, WA 98021

CERTIFIES THAT THE ITEMS ASSOCIATED WITH THE SHIPMENT IDENTIFIED BY MANIFEST AR001120676,  
MD# 06082 RECEIVED FROM HAVE BEEN PROCESSED AS DESCRIBED BELOW:

SEQ DESCRIPTION #	TREATMENT DATES	TREATMENT DISPOSAL METHOD
001 RQ WET FILM LIQ CORR	07/30/03-07/31/03	INCINERATION

UNDER CIVIL AND CRIMINAL PENALTIES OF LAW FOR THE MAKING OR SUBMISSION OF FALSE OR FRAUDULENT STATEMENTS OR REPRESENTATIONS (18 U.S.C. 1001 AND 15 U.S.C. 2615), I CERTIFY THAT THE INFORMATION CONTAINED IN OR ACCOMPANYING THIS DOCUMENT IS TRUE, ACCURATE, AND COMPLETE. AS TO THE IDENTIFIED SECTION(S) OF THIS DOCUMENT FOR WHICH I CANNOT PERSONALLY VERIFY TRUTH AND ACCURACY, I CERTIFY AS THE COMPANY OFFICIAL HAVING SUPERVISORY RESPONSIBILITY FOR THE PERSONS WHO, ACTING UNDER MY DIRECT INSTRUCTIONS, MADE THE VERIFICATION THAT THIS INFORMATION IS TRUE, ACCURATE, AND COMPLETE.

IF YOU HAVE ANY QUESTIONS REGARDING THIS CERTIFICATE OF TREATMENT/DISPOSAL, PLEASE CONTACT YOUR SALES REPRESENTATIVE.

NAME CHUCK SLAUGHTER  
TITLE PLANT MANAGER  
DATE 7/31/03

**Environmental & Ecological Organizations**

- Anchor Environmental 1411 4th ----- 206 287-9130
- Audubon Society East Lake Washington  
P O Box 3632 Blvu ----- 425 451-3717
- Cascade Land Conservancy 615 2d -- 206 292-5907
- Cascadia Quest  
World Conservation Corps  
810 18th Suite 206 ----- 206 322-9296
- Center for Environmental Citizenship  
2021 3d ----- 206 256-6429
- Center For Environmental Law & Policy  
1165 Eastlake Ave E Suite 400 ----- 206 223-8454
- Community Coalition For Environmental Justice  
105 14th ----- 206 720-0285
- Earth Ministry 1305 NE 47th Seattle -- 206 632-2426
- Earth Share Of Washington  
1402 3d ----- 206 622-9840
- Earth Systems Institute  
1314 NE 43d ----- 206 633-1792
- EnHome Foundation Inc ----- 206 243-1390
- ENTRIX INC  
2701 1st Ave Suite 240 Seattle ----- 206 269-0104
- ENTRIX INC  
2701 1st Ave Suite 240 Seattle ----- 206 418-1260
- Environmental Coalition Of South Seattle  
8201 10th Ave S ----- 206 767-0432
- Friends Of Issaquah Salmon Hatchery  
125 W Sunset Way Isaq ----- 425 392-1118
- Friends Of The Earth 6512 23d NW --- 206 297-9460
- Heart Of America NW 1305 4th ----- 206 382-1014
- I'M A Pal 742 S Southern ----- 206 762-3640
- International Snow Leopard Trust  
4649 Sunnyside N ----- 206 632-2421
- Land Trust Alliance/Northwest  
3517 NE 45th ----- 206 522-3134
- Marine Stewardship Council Limited The  
4005 20th W ----- 206 691-0188
- Mid-Sound Fisheries Enhancement Group  
7400 Sand Point Way NE ----- 206 529-9467
- Mountains To Sound Greenway  
1011 Western Ave ----- 206 382-5565
- Nature Conservancy  
Pine Suite 1100 ----- 206 343-4344
- Nature Conservancy Consortium The  
SW Oregon St ----- 206 923-0853
- North Cascades Conservation Council  
PO Box 95980 Seattle ----- 206 282-1644
- Northwest Ecosystem Alliance  
3414 1/2 Fremont N ----- 206 675-9747
- Northwest Environment Watch  
1402 3rd Ave #1127 Seattle ----- 206 447-1880
- Northwest Jewish Environmental Project  
1122 E Pike St #770 ----- 206 256-0264
- Northwest Sierra Club  
180 Nickerson ----- 206 378-0114
- Oceans Blue Foundation  
1111 Third Ave Suite 2500 Seattle ----- 206 583-8338
- Pacific Crest Biodiversity Project  
4649 Sunnyside Ave N Suite 321 ----- 206 545-3734
- Pacific Forest Trust The  
157 Yesler Way ----- 206 292-4747
- Pacific SW Group ----- 206 417-0810
- Pacific Watershed Institute The  
19624 Hwy 2 Ste 165 Monroe ----- 425 489-0781
- People For Puget Sound  
1402 3rd Ave ----- 206 382-7007
- Physicians For Social Responsibility Of  
Washington 4554 12th NE ----- 206 547-2630
- PlanetCPR 1731 Westlake N ----- 206 285-3888
- Puget Soundkeeper Alliance  
1415 W Dravus ----- 206 286-1309
- Rainier Audubon Society  
P O Box 778 Auburn ----- 253 939-6411
- Resource Institute  
2319 N 45th Suite #139 ----- 206 784-6762
- Rivers Council Of Washington  
509 10th E Floor 3 Dickson Room ----- 206 568-1380
- Seattle Audubon Society  
8050 35th Ave NE ----- 206 523-8243
- Sierra Club  
Outings & Activities ----- 206 523-2019  
Seattle Group 8511 15th NE Rm 201 --- 206 523-2147
- Strategic Diagnostics Seattle ----- 206 985-7360
- Terra Nova Planning & Research  
1111 Third Ave Suite 2500 ----- 206 583-8340
- TREmendous Seattle  
7400 Sand Point Way NE ----- 206 985-6867
- Trust For Public Land The  
011 Western Ave ----- 206 587-2447
- Washington Citizens For Resource Conservation  
4519 1/2 University Wy NE Ste 204 ----- 206 675-0836
- Washington Environmental Council  
615 2d ----- 206 622-8103
- Washington Toxics Coalition  
4649 Sunnyside N ----- 206 632-1545
- Washington Water Trails Association  
4649 Sunnyside N ----- 206 545-9161
- Washington Water Trust  
3417 Fremont N ----- 206 675-1585

- Washington Wetlands Network Of National  
Audubon Society  
5031 University Way NE Rm 207 ----- 206 524-4570
- Washington Wilderness Coalition  
4649 Sunnyside Ave N #242 ----- 206 633-1992
- Western Land Exchange Project  
2366 Eastlake E ----- 206 325-3503
- Wilderness Awareness School  
26331 NE Valley St #5 PMB 137 ----- 425 788-1301
- Wilderness Society-Pacific Northwest Region  
Office 1424 4th Ave Ste 816 ----- 206 624-6430
- World Corps 705 2d ----- 206 634-2248
- Zero Population Growth-Seattle Chapter  
4426 Burke N ----- 206 548-0152

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David Hahn, CEI, MBA, MAI, CCIM

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- AMEC Earth & Environmental Inc  
11335 NE 122nd Way Kirkland ----- 425 820-4669
- Argus Pacific Inc  
1900 W Nickerson St #315 Seattle ----- 206 285-3373
- Assessment & Remediation Consulting Services  
Issaquah ----- 425 837-0220
- Associated Earth Sciences Inc 179 Madrone Ln N  
Bainbridge Island ----- 206 780-9370
- Associated Earth Sciences Inc  
911 5th Av Suite 100 Kirk ----- 425 827-7701
- B-TWELVE ASSOCIATES INC**  
Wetland Delineation, Mitigation & Permitting WBE  
1103 W Meeker Suite C Kent ----- 253 859-0515
- Berryman & Henigar  
720 3rd Ave Suite 1200 Seattle ----- 206 505-3400
- Brooks Rand Ltd  
3950 6th Ave NW Seattle ----- 206 632-6206
- BUDGET TANK REMOVAL SERVICES**  
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- Business And Industry Resource Venture  
----- 206 389-7304

Refresh your memory regarding the name of a firm or its location right here in the Qwest Yellow Pages. Why wonder? The Yellow Pages will help you recall the name of the firm you've forgotten.

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- Costal Environmental Systems  
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999 Third Ave Ste 3800 Seattle ----- 206 903-0695
- DuPont Environmental  
14205 SE 36th St Ste 100 ----- 425 649-1155
- Duvernoy Land Use & Environmental Service  
615 2d ----- 206 292-5709
- EA ENGINEERING SCIENCE & TECHNOLOGY**  
1715 114th Ave SE #219 Bellevue ----- 425 451-7400
- E & A Environmental Consultants Inc  
19110 Bothell Wy NE Bothell ----- 425 485-3219
- EDAW INC**  
1505 Western Ave Suite 601 Seattle -- 206 622-1176
- EHS International Inc  
9 Lake Bellevue Dr Suite 203 Bellevue -- 425 455-2959
- ENSR 9521 Willows Rd Redmond ----- 425 881-7700
- ERM-WEST INC** 915 118th Ave SE Suite 130  
Bellevue ----- 425 462-8591

- EVS ENVIRONMENT**  
200 W Mercer ----- 206 217-9337
- ECO Endeavors LLC  
18411 Fremont Ave N Shoreline ----- 206 533-9318
- Ecology & Environment Inc  
2101 4th Av ----- 206 624-9537
- EcoPacific Environmental Services  
2001 183d NE Redmond ----- 425 746-5481
- Ecosystem Database Development And  
Research 4649 Sunnyside N ----- 206 632-1949
- Ecotechniek Pacific  
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101 Stewart St Suite #101 Seattle ----- 206 269-5041
- Environment International  
5505 34th NE ----- 206 525-3362
- ENVIRONMENTAL ASSESSMENT GROUP THE**  
----- 206 622-3999

- Please See Advertisement This Page*
- ENVIRONMENTAL ASSOCIATES INC**  
2122 112th Ave NE Ste B-100 ----- 425 455-9025
  - Environmental Careers Org  
1218 3d Suite 1515 ----- 206 625-1750
  - Environmental Company Inc The  
710 NW Juniper Ste 208 Isaq ----- 425 557-7899
  - Environmental Connections Inc  
6548 Jones NW ----- 206 784-6842
  - Environmental Financial Information Services  
Inc 3257 16th W ----- 206 284-3968
  - ENVIRONMENTAL HAZARDS CONTROL (EHC)** Seattle ----- 253 874-6556
  - ENVIRONMENTAL MGMT RESOURCES INC/EMR** 2509 152nd Ave NE Suite B  
Redmond ----- 425 861-4561

**ENVIRONMENTAL PARTNERS INC**  
**PHASE 1 \*ASBESTOS \*USTS**  
**PROPERTY TRANSACTIONS**  
*Confidential & Responsive*  
**425-889-4747**  
10940 NE 33rd Place Suite 110  
Bellevue, WA 98004

- Environmental Quality Management Inc  
Lynnwood ----- 425 673-2900
- Environmental Resolutions Inc  
905 Industry Dr Tukwila ----- 206 575-6220
- Environmental Services Directory -- 206 282-2591
- Environmental Technology Services  
----- 425 741-8639
- Environmental West Exploration Inc  
Woodnvl ----- 425 844-3066

**ENVIROTEST RESEARCH INC**  
**Indoor Air Quality - Mold H<sub>2</sub>S - Sewer Gas - Odors**  
9600 Stone N ----- 206 522-5449

**Equipose NW**  
Please See-Sound Environmental Strategies  
Exponent Environmental  
15375 SE 30th Pl Blvu ----- 425 643-9803

**FARALON CONSULTING**  
320 3d NE Isaq ----- 425 427-0061  
Floyd & Snider Inc 83 S King ----- 206 292-2078

**FOSS ENVIRONMENTAL SERVICES**  
• REMEDIATION SERVICES  
• INDUSTRIAL/TANK CLEANING  
• VACUUM TRUCK SERVICES  
• SPILL CONTROL PRODUCTS  
• LAND & MARINE SPILL RESPONSE  
24-HR Emergency Response Hotline  
**800-337-7455(FE-SPILL)**  
200 SW Michigan Street ----- 206 767-0441

- FRONTIER GEOSCIENCES INC**  
Trace Metal Research And Analysis  
414 Ponbus N ----- 206 622-6960
- Galloway Environmental Inc  
3102 220 Pl SE Issaquah ----- 425 688-8852
- GEO-RECON INTERNATIONAL LTD**  
516 NE 165th ----- 206 362-9484
- Geometrix Environmental Inc Bainbridge Island  
Toll Free-Dial 1 & Then ----- 888 780-1220

- GLOBAL ENVIRONMENTAL**  
Please See Our Ad Under Tanks-Removal  
3840 W Marginal Wy SW ----- 206 623-0621  
Global Ozone 1010 Valley ----- 206 442-9038
- Greenfield International  
204 Central Way Suite E Kirk ----- 425 576-5139
- Gregory Marston B BEI ----- 425 641-0928
- HART CROWSER INC**  
1910 Fairview Avenue E ----- 206 324-9530
- HARZA ENGINEERING CO**  
2353 130th Ave NE Suite 200 Blvu ----- 425 602-4000
- Harza Northwest Inc  
2353 130th Av NE Blvu ----- 425 882-2455
- Herrera Environmental Consultants Inc/MBE  
2200 6th Ave Suite 601 ----- 206 441-9080
- Human Health Risk Resources Inc  
1711 29th Ave W Seattle ----- 206 284-4820
- HWA GEOSCIENCES INC**  
19730 64th Ave W Suite 200 ----- 425 774-0106

- IT Corporation  
3350 Monte Villa Parkway Bothell ----- 425 485-5000
- Intertox Inc 2819 Elliott ----- 206 443-2115
- Jones & Stokes Associates Inc  
Environmental Consulting & Natural Resources  
11820 Northup Way Suite E-300 ----- 425 822-1077
- Bellevue ----- 425 778-7165
- KEECO 19023 36th Av W Lyn ----- 425 778-7165
- Kleen Environmental Technologies Inc  
754 Garfield ----- 206 285-8010

(Continued Next Page)

# ACORD™ CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YY)  
7/9/04

**PRODUCER**  
**PARKER, SMITH & FEEK, INC.**  
 2233 112th Avenue N.E.  
 Bellevue, Washington 98004  
 Phone: 425-709-3600 Fax: 425-709-7460

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

### INSURERS AFFORDING COVERAGE

**INSURED**  
**KLEEN ENVIRONMENTAL TECHNOLOGIES, INC.**  
 754 Garfield Street  
 Seattle, Washington 98109

INSURER A: HUDSON INSURANCE COMPANY  
 INSURER B: NATIONAL CONTINENTAL INSURANCE COMPANY  
 INSURER C: HUDSON INSURANCE COMPANY  
 INSURER D: FIREMAN'S FUND INSURANCE COMPANY  
 INSURER E:

### COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS
A	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR	FEC5101112	03/11/2004	03/11/2005	EACH OCCURRENCE \$ 3,000,000
	<input checked="" type="checkbox"/> CONTRACTORS POLLUTION LIABILITY GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC				FIRE DAMAGE (Any one fire) \$ 50,000
					<input type="checkbox"/> MED EXP (Any one person) \$ 5,000 <input type="checkbox"/> PERSONAL & ADV INJURY \$ 3,000,000 <input type="checkbox"/> GENERAL AGGREGATE \$ 3,000,000 <input type="checkbox"/> PRODUCTS-COMP/OP AGG \$ 3,000,000
	<input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS <input checked="" type="checkbox"/> MCS Filing Included				CPW6979423-4
<input type="checkbox"/> ANY AUTO				AUTO ONLY - EA ACCIDENT \$ OTHER THAN AUTO ONLY: EA ACC \$ AGG \$	
	<input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> DEDUCTIBLE <input type="checkbox"/> RETENTION \$				EACH OCCURRENCE \$ AGGREGATE \$ \$ \$ \$
C	<del>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</del> WASHINGTON STATE STOP GAP	FEC5101112	03/11/2004	03/11/2005	WC STATU-TORY LIMITS <input checked="" type="checkbox"/> OTH-ER <input type="checkbox"/> EL ONLY
	E.L. EACH ACCIDENT \$ 1,000,000				
	E.L. DISEASE - EACH EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000				
D	OTHER LEASED & RENTED EQUIPMENT (ACTUAL CASH VALUE)	MZ198270351	05/13/2004	05/13/2005	LIMIT \$ 175,000 DEDUCTIBLE \$ 1,000

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/EXCLUSIONS ADDED BY ENDORSEMENT/SPECIAL PROVISIONS  
 For Information Only. CANCELS AND REPLACES PREVIOUSLY ISSUED CERTIFICATE.

CERTIFICATE HOLDER

ADDITIONAL INSURED; INSURER LETTER:

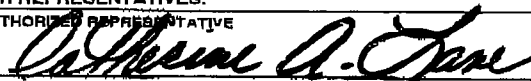
CANCELLATION

\*10 days for non-payment of premium

FOR INFORMATIONAL PURPOSES ONLY.

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 0\* DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

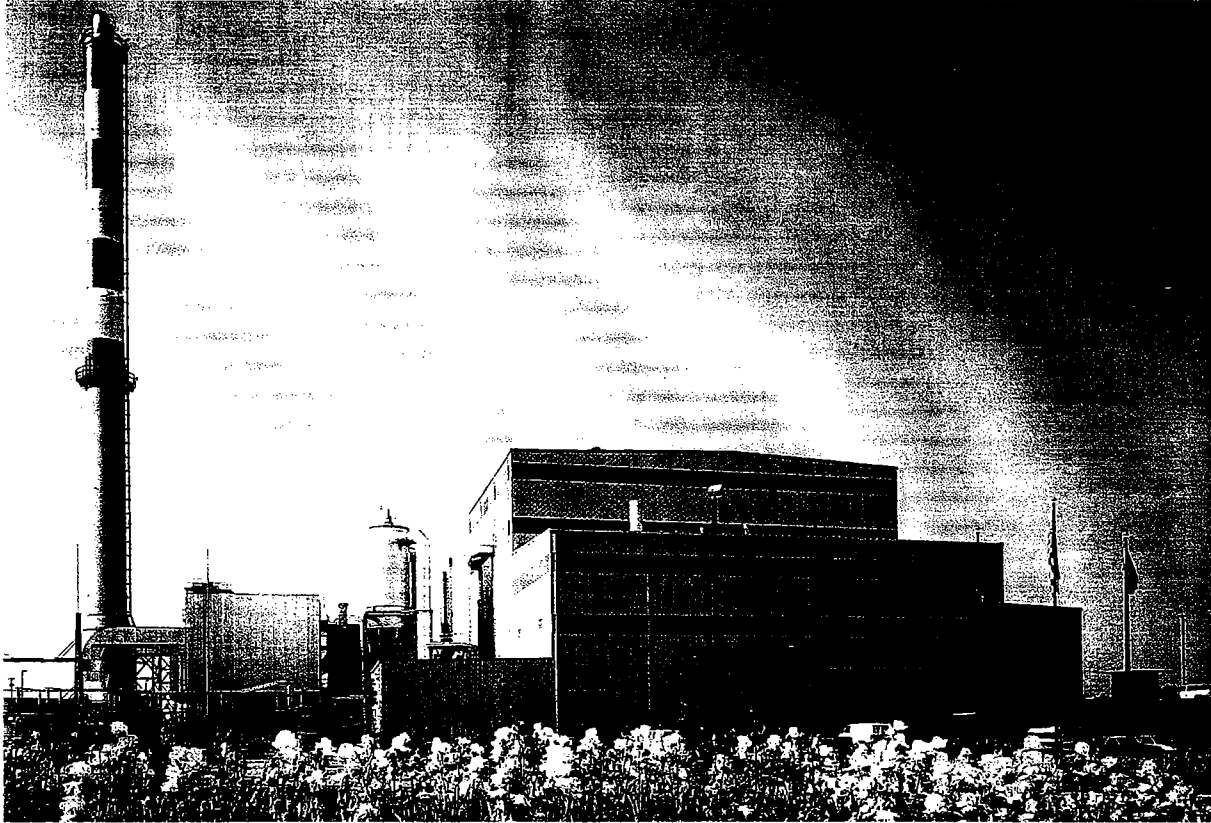


A representative from Covanta will not be appearing at the hearing; therefore, the exhibits that would have been part of that person's statement have been attached as **Exhibit 6** and **Exhibit 7** to the statement of Mr. Allen McCloskey.



# Covanta Marion, Inc.

Brooks, Oregon



The Marion County Solid Waste-to-Energy Facility began commercial operation in March 1987, servicing the solid waste management needs of the more than 270,000 people of Marion County. The facility processes 550 tons per day of solid waste, which generates up to 13.1 megawatts of renewable energy that is sold to Portland General Electric. The Marion facility was the first mass burn waterwall resource recovery facility burning municipal solid waste in the United States to use dry flue gas scrubbers and fabric filter baghouses to control acid gases and particulates. In addition to municipal solid waste, Marion processes about 90 tons per month of supplemental waste including non-hazardous medical waste. The facility is located in Brooks, a small farming community about four miles north of Salem, the state capital, and 40 miles south of Portland.

**The Marion County  
Solid Waste-to-Energy Facility**

**COVANTA**

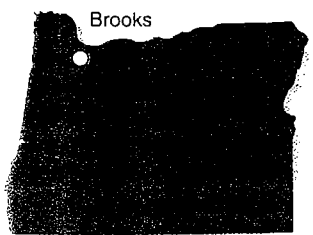
Environmental Solutions

# Covanta Marion, Inc.

## Recycling Waste Into Energy

The facility's mass burn combustion system incorporates the technology of German-based Martin GmbH. Waste is combusted at furnace temperatures exceeding 1,800 degrees Fahrenheit and reduced to an inert ash residue which is approximately 10% of its original volume; combustion ash is disposed of in a specially lined ash monofill

which is owned and operated by the County and located about 10 miles north of the facility. Before leaving the facility, combustion air is directed through technologically advanced air pollution control equipment, including dry flue gas scrubbers and fabric filter baghouses.



OREGON

## An Integrated System

The Marion County Solid Waste-to-Energy Facility is the cornerstone of the County's integrated waste management system. In addition to converting waste into energy, the County provides curbside pick-up of recyclable materials such as metals, glass and newspaper. The County also runs a drop-off program for collection of yard waste; these organic materials are then composted and used in agricultural applications. Ferrous metal recovered from combustion ash is also a major contributor to the County's recycling

efforts. A unique feature of the County's integrated system is its state-of-the-art ash monofill and leachate system. Leachate from the ash monofill is treated through a vacuum distillation process and clean drinking-quality water is discharged.

The Marion County Solid Waste-to-Energy Facility is located in Brooks, about 4 miles north of Salem. For information or to arrange a tour, please call 503-393-0890.

## Facility Specifications

**Rated Refuse Combustion Capacity**  
550 tons per day

**Unit Design**  
Two 275 ton-per-day waterwall furnaces

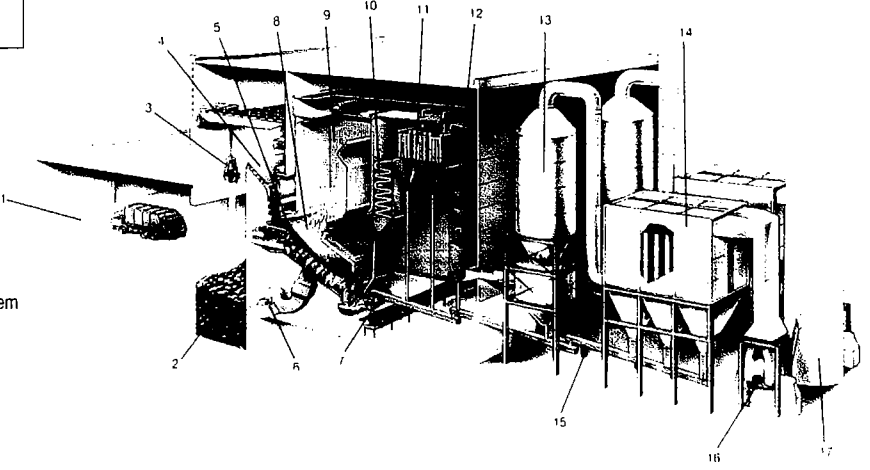
**Guaranteed Throughput**  
170,000 tons per year

**Guaranteed Waste Delivery**  
145,000 tons per year

**Energy Generation at Rated Capacity**  
Up to 13.1 MW, sold to Portland General Electric Company

## A Typical COVANTA Waste-to-Energy Facility

- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>1. Tipping Floor</li> <li>2. Refuse Holding Pit</li> <li>3. Grapple Feed Chute</li> <li>4. Feed Chute</li> <li>5. Martin Stoker Grate</li> <li>6. Combustion Air Fan</li> <li>7. Martin Ash Discharger</li> <li>8. Combustion Chamber</li> <li>9. Radiant Zone (furnace)</li> </ol> | <ol style="list-style-type: none"> <li>10. Convection Zone</li> <li>11. Superheater</li> <li>12. Economizer</li> <li>13. Dry Gas Scrubber</li> <li>14. Baghouse</li> <li>15. Fly Ash Handling System</li> <li>16. Induced Draft Air Fan</li> <li>17. Stack</li> </ol> |
|--|---|



Refuse collection trucks are weighed at the scalehouse and monitored for safety. Once cleared, they enter the tipping building and dump their waste into the storage pit. An overhead crane mixes the waste in the pit and lifts the waste up into a feed chute leading to the furnace. From the feed chute, waste is pushed by hydraulic ram feeders onto a stoker grate. The MARTIN Reverse-Reciprocating Stoker is sloped downward and is composed of alternate rows of fixed and moving grate bars. The grate bars push upward against the natural downward movement of the waste bed. This constant movement ensures that the burning waste is continually agitated and pushed back, thus serving as underfire for freshly-fed waste. A forced draft fan supplies the primary combustion air underneath the grate. In addition, overfire air is injected through the front and rear walls of the furnace.

Inside the steel tubes that form the furnace walls and the boiler, heat from the combustion process converts water to steam. The superheater further heats the steam before it is sent to a turbine generator to produce electricity. After passing through the boiler sections, the hot combustion gases are used to preheat boiler feedwater in the economizer.

While the combustion gases move through the boiler, the bottom ash slowly makes its way to the end of the grate where it falls into the water quench trough of the Martin Ash Discharger.

From the boiler, the cooled gases enter the advanced air pollution control system. Using the lime slurry, the dry scrubber neutralizes any acid-forming gases, such as sulfur oxides and hydrogen chloride.

As the gas stream travels through these filter devices, more than 99 percent of particulate matter is removed. Captured fly ash particles fall into hoppers and are transported by an enclosed conveyor system to the Martin Ash Discharger where they are wetted to prevent dust, and mixed with the bottom ash from the grate. The ash residue is then conveyed to an enclosed building where it is loaded into trucks and taken to a landfill designed to protect against groundwater contamination. Ash residue from the furnace can be processed for removal of recyclable scrap iron.

All aspects of the plant's operation are monitored from the central control room 24 hours a day, seven days a week, 365 days a year.



*Covanta Marion, Inc.*  
4850 Brooklake Road,  
Brooks, OR 97305  
503-393-0890

**CERTIFICATE OF SERVICE**

I hereby certify that I have this day served five (5) Statements of Pre-filed Testimony with Exhibits upon the persons and entities listed below by electronically transmitting said documents in PDF Format to the UTC Records Center at [records@wutc.wa.gov](mailto:records@wutc.wa.gov) and the e-mail address for each person shown below and that, in addition, I have this day deposited the original and six (6) copies of said documents in the United States mail addressed to:

**Washington Utilities and Transportation Commission  
1300 S. Evergreen Park Drive S.W.  
Olympia, WA 98504-7250**

with first class postage paid.

The following persons served via e-mail and U.S. Mail (if requested):

Stephen B. Johnson  
Garvey Schubert Barer  
1191 Second Avenue – 18<sup>th</sup> Floor  
Seattle, WA 98101-2939  
[sjohnson@gsblaw.com](mailto:sjohnson@gsblaw.com)

James K. Sells  
Ryan Sells Uptegraft  
9657 Levin Road N.W., Suite 240  
Silverdale, WA 98383  
[jimsells@rsulaw.com](mailto:jimsells@rsulaw.com)

Greg Trautman  
Assistant Attorney General  
1400 S. Evergreen Park Drive S.W.  
P.O. Box 40128  
Olympia, WA 98504-0128  
[Gtrautma@wutc.wa.gov](mailto:Gtrautma@wutc.wa.gov)

DATED at Kent, WA this 13<sup>th</sup> Day of August, 2004

  
\_\_\_\_\_  
Marina Anna Baker