EXHIBIT 6: MAINTENANCE INSTRUCTIONS

Terre Kleen Maintenance Procedures

Maintenance Record

When a Terre Kleen™ unit is newly installed, frequent inspection is highly recommended. The design of the Terre Kleen™ unit permits easy inspection. It is recommended that during the first year after installation, inspections be performed at least quarterly for the purpose of noting the rate of pollutant capture: oil, grease, trash, debris, vegetation and sediment.

Charts containing size and volume information for each Terre Kleen model is attached as **Exhibit A**.

Attached as **Exhibit B** is a form that may be used for recording information resulting from the inspections. Maintaining accurate records provides a history of the pollutant accumulation for the Terre Kleen.

Sediment Measurement

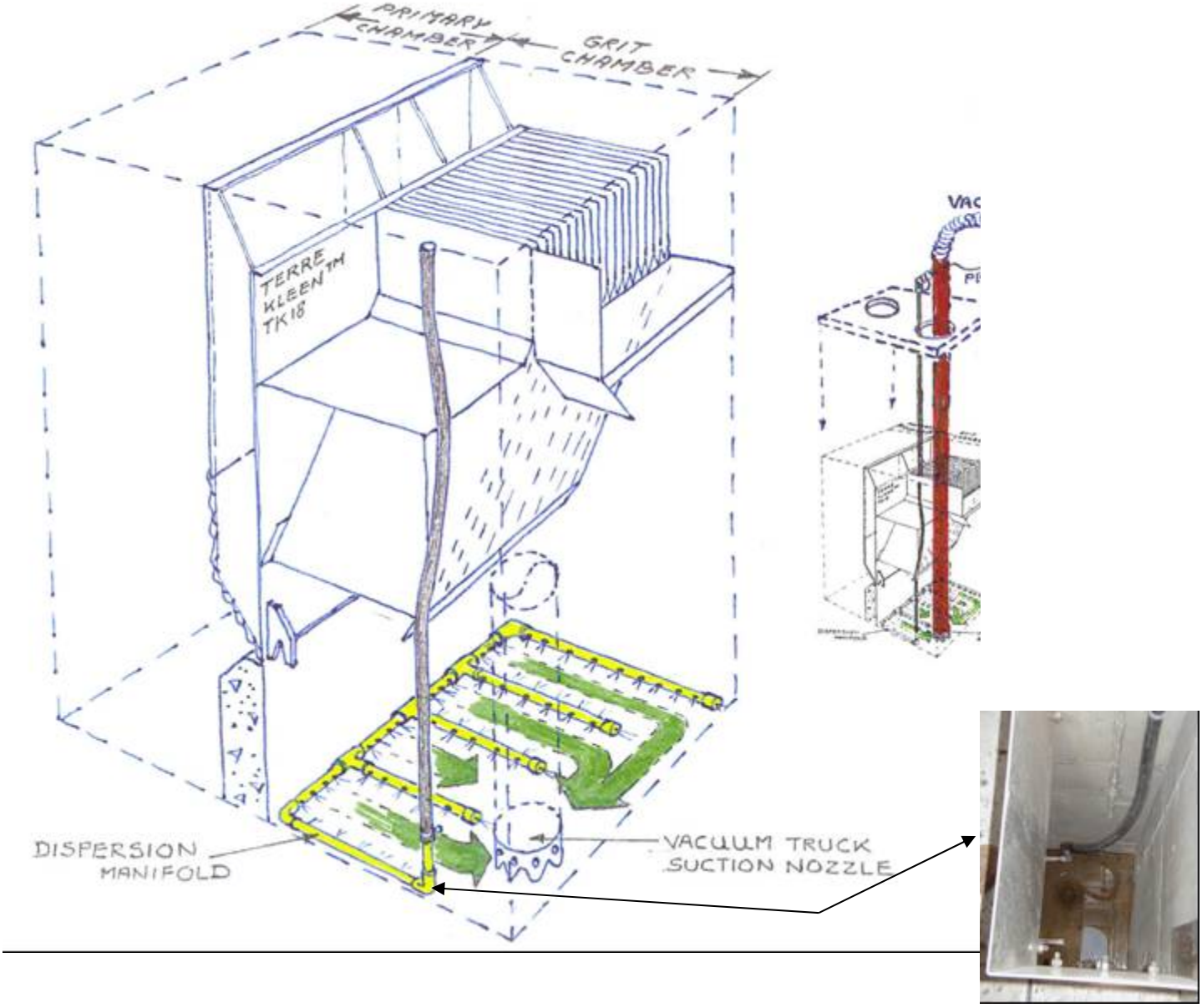
To determine sediment accumulation, a stadia rod or similar measuring device may be used. Cleaning is recommended when the sediment is found to be at the level shown in the Terre Kleen™ flow diagram. To avoid underestimating the volume of sediment in the chamber, care must be exercised in lowering the measuring device to the top of the sediment pile.

Maintenance Cleaning

The clean-out procedure may occur anytime after a rain event. It is not necessary to wait for particles to settle due to the high sedimentation efficiency of the device.
The Terre Kleen™ is designed with clear access to the primary and grit chambers. A vacuum truck, or similar trailer mounted equipment, can be used to clean both chambers by lowering the suction hose through the openings.
The oil and litter in the primary chamber should be removed first.
Depending on the equipment used, it may be necessary to remove floating trash and debris with a net or rake.
After the oil and litter is removed, the grit chamber can be cleaned out. Finally, switch back to the primary chamber to remove remaining debris. Water can be sprayed into the chambers as necessary to loosen debris
To further prevent discharge of hydrocarbons, “oil absorption booms” were added to the primary chamber during installation. They will float among the litter and begin to sink as they absorb oil. The boom size 2¼” Ø x 12” will absorb about a quart of oil. These booms should be replaced when they become saturated with oil and no longer appear above the water surface Additional booms can be purchased from Terre Hill Concrete Products. *(The sorbent booms are placed in the primary chamber for the absorption of gasoline; diesel fuel, lube oil, jet fuel, transformer oils, chlorinated solvents, aromatic solvents, hydraulic oils, and light crude. The sorbent boom is Rubberizer® boom manufactured by Haz-Mat Response Technologies Inc. A standard TerreKleen™ TK09 has 4 booms, TK18 has 8 booms, TK27 has 12 booms, TK36 has 16 booms, TK45 has 20 booms, TK54 has 25 booms and a TK63 has 30 booms.)*

Sludge dispersion manifold

Each Terre Kleen™ water quality device contains a “Sludge Dispersion Manifold”. The manifold pipes are mounted to the floor underneath the inclined plate settler and connect to a hose that leads to the clean out opening at grade level. This hose is pressurized by the vacuum truck’s spray nozzle. While the suction nozzle removes the captured pollutants, the pressurized manifold sprays water through the small horizontal holes in the manifold pipes. This water lifts and disperses the sludge blanket causing it to drain to the suction nozzle.



Disposal of Removed Pollutants

Disposal of removed material will depend on the nature of the drainage area. For example, sediment collected from a system of stormwater inlets may possibly be disposed at a landfill after the liquid fraction is decanted at a sewage treatment facility. Material removed from the Terre Kleen™ must be handled according to local, state, and federal regulations. Some materials, such as sediment and detritus from lawn areas may be reused on site, which is often recommended by the local authorities. After the clean-out procedure is complete, replace the manhole covers securely to the frames for safety purposes.

Cold Weather Conditions

The depth of the structure in the soil insulates it from freezing which is similar to exposure conditions of septic tanks. There have not been any reported issues regarding ice and snow accumulation in any Terre Kleen installation.

The Terre Kleen insert is made of "5052 Marine Grade Aluminum" with stainless steel fasteners which guards against corrosion.

Colder temperatures and saltwater stratification may reduce the settling velocity of particles, which can result in fewer particles being "trapped".

The amount of grit and sand in the runoff from paved areas may be significantly increased in the winter, which may warrant more frequent inspection and maintenance.

Confined Space Entry

Regular maintenance and clean out does not require confined space entry into the Terre Kleen ™unit. If confined entry is required, it will need to be performed by qualified personnel who are properly trained for confined space activity using proper equipment as per the latest OSHA regulations.

The Terre Kleen™ will trap floatable litter and oils that are not emulsified in the stormwater runoff. **Keep sparks and open flames away when working around a Terre Kleen™ unit that may contain flammable material**

Exhibit A: Terre Kleen Model Size and Volume Charts

Exhibit B: Terre Kleen™ Maintenance Chart

Exhibit A Terre Kleen Model Size and Volume Charts

Your Terre Kleen™ Stormwater Treatment device is a TK 02		
Item	Description	Comment
Primary chamber	oil, litter and debris capture	4 oil absorption booms were supplied
Grit chamber	Flat horizontal area	12.8 square feet of projected sedimentation area
Total removal volume	1496 gallons	Use a Vacuum truck with at least this capacity for complete cleaning.
Oil storage	133 gallons	
Sediment storage	88 cubic feet (658 gallons)	Combined primary and grit chamber volume.
Water depth - Empty	75 Inches	Measured from water surface to concrete bottom at no flow.
Water depth - Full	42 Inches	Measured from water surface to top of collected sediment at no flow.

Your Terre Kleen™ Stormwater Treatment device is a TK 09		
Item	Description	Comment
Primary chamber	oil, litter and debris capture	4 oil absorption booms were supplied
Grit chamber	9 inclined sedimentation cells	57 square feet of projected sedimentation area
Total removal volume	1473 gallons	Use a Vacuum truck with at least this capacity for complete cleaning.
Oil storage	140 gallons	
Sediment storage	90 cubic feet (673 gallons)	Combined primary and grit chamber volume.
Water depth - Empty	75 Inches	Measured from water surface to concrete bottom at no flow.
Water depth - Full	42 Inches	Measured from water surface to top of collected sediment at no flow.

Your Terre Kleen™ Stormwater Treatment device is a TK 18		
Item	Description	Comment
Primary chamber	oil, litter and debris capture	8 oil absorption booms were supplied
Grit chamber	18 inclined sedimentation cells	115 square feet of projected sedimentation area
Total removal volume	2127 gallons	Use a Vacuum truck with at least this capacity for complete cleaning.
Oil storage	205 gallons	
Sediment storage	129 cubic feet (963 gallons)	Combined primary and grit chamber volume.
Water depth - Empty	75 Inches	Measured from water surface to concrete bottom at no flow.
Water depth - Full	42 Inches	Measured from water surface to top of collected sediment at no flow.

Your Terre Kleen™ Stormwater Treatment device is a TK 27		
Item	Description	Comment
Primary chamber	oil, litter and debris capture	12 oil absorption booms were supplied
Grit chamber	27 inclined sedimentation cells	172 square feet of projected sedimentation area
Total removal volume	2782 gallons	Use a Vacuum truck with at least this capacity for complete cleaning.
Oil storage	264 gallons	
Sediment storage	168 cubic feet (1259 gallons)	Combined primary and grit chamber volume.
Water depth - Empty	75 Inches	Measured from water surface to concrete bottom at no flow.
Water depth - Full	42 Inches	Measured from water surface to top of collected sediment at no flow.

Your Terre Kleen™ Stormwater Treatment device is a TK 36		
Item	Description	Comment
Primary chamber	oil, litter and debris capture	16 oil absorption booms were supplied
Grit chamber	36 inclined sedimentation cells	230 square feet of projected

		sedimentation area
Total removal volume	3442 gallons	Use a Vacuum truck with at least this capacity for complete cleaning.
Oil storage	327 gallons	
Sediment storage	208 cubic feet (1556 gallons)	Combined primary and grit chamber volume.
Water depth - Empty	75 Inches	Measured from water surface to concrete bottom at no flow.
Water depth - Full	42 Inches	Measured from water surface to top of collected sediment at no flow.

Your Terre Kleen™ Stormwater Treatment device is a TK 45		
Item	Description	Comment
Primary chamber	oil, litter and debris capture	20 oil absorption booms were supplied
Grit chamber	45 inclined sedimentation cells	288 square feet of projected sedimentation area
Total removal volume	4097 gallons	Use a Vacuum truck with at least this capacity for complete cleaning.
Oil storage	389 gallons	
Sediment storage	248 cubic feet (1852 gallons)	Combined primary and grit chamber volume.
Water depth - Empty	75 Inches	Measured from water surface to concrete bottom at no flow.
Water depth - Full	42 Inches	Measured from water surface to top of collected sediment at no flow.

Your Terre Kleen™ Stormwater Treatment device is a TK 54		
Item	Description	Comment
Primary chamber	oil, litter and debris capture	24 oil absorption booms were supplied
Grit chamber	54 inclined sedimentation cells	346 square feet of projected sedimentation area
Total removal volume	4745 gallons	Use a Vacuum truck with at least this capacity for complete cleaning.
Oil storage	451 gallons	

Sediment storage	287 cubic feet (2149 gallons)	Combined primary and grit chamber volume.
Water depth - Empty	75 Inches	Measured from water surface to concrete bottom at no flow.
Water depth - Full	42 Inches	Measured from water surface to top of collected sediment at no flow.

Your Terre Kleen™ Stormwater Treatment device is a TK 63		
Item	Description	Comment
Primary chamber	oil, litter and debris capture	24 oil absorption booms were supplied
Grit chamber	63 inclined sedimentation cells	346 square feet of projected sedimentation area
Total removal volume	5399 gallons	Use a Vacuum truck with at least this capacity for complete cleaning.
Oil storage	513 gallons	
Sediment storage	327 cubic feet (2445 gallons)	Combined primary and grit chamber volume.
Water depth - Empty	75 Inches	Measured from water surface to concrete bottom at no flow.
Water depth - Full	42 Inches	Measured from water surface to top of collected sediment at no flow.

Terre Kleen™ Maintenance Chart					
Model:			Water Depth Empty:		
Date	Water Depth	Sediment Depth	Floatable Layer Thickness	Maintenance Performed	Comments

Exhibit B: Terre Kleen Maintenance Chart

FIGURE 1: TERRE KLEEN