STORMVAULT COALESCING
MEDIA-PACK SEPARATOR (SVCMS)

OPERATION & MAINTENANCE MANUAL

Prepared For:

Project Name:
Project Location:
Date: 03/xx/2020
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1. PROJECT INFORMATION

Project Name:

Project Location:

Subject: Enhanced Gravity Oil/Water Separation

SWTU: StormVault Coalescing Media-Pack Separator (SVCMS)

Model: SVCMS-X-XX

2. COALESCLING PLATE SEPARATOR COMPONENTS

Figure 1: Coalescing Separator showing Inlet, separation/Outlet chamber
3. WARNING, DISCLAIMER & SAFETY PRECAUTIONS

This manual is provided for use only by persons experienced and knowledgeable in underground oil/water separator operation and maintenance. This manual provides general guidance, and conditions. Your specific installation site may make some or all of the guidance inapplicable. If you think you may need some professional guidance or more information and instructions, please contact Jensen Stormwater Systems prior to implementing operations or maintenances.

As an owner, you are solely responsible for compliance with all federal, state and local laws, regulations and ordinances applicable to your installation and operation and disposal of captured solid and liquid pollutants. Jensen Stormwater Systems disclaims all liability related to any misuse of the oil/water separator or failure to follow all guidance and instruction provided by Jensen Stormwater Systems.

The following safety precaution is in addition to other warnings provided within the text of this manual. These safety precautions are recommended and must be applied during operations and maintenance. It is not possible to determine in advance all of the possible situations that may arise, so the operator should exercise caution and use good operation procedures in the use of the unit. In addition to the procedures contained herein, observe all other required safety procedures. Always wear correct safety clothing and equipment and respect all safety rules. Safety is the sole responsibility of the owner and operating and maintenance personnel.

1. All operating personnel performing service on the separator system must be familiar with normal safety precautions and this manual before doing any work.
2. Do not service the equipment alone. Do not perform any work on the unit without another person present to render aid in the event of problems.
3. Do not perform any service on the equipment with any electrical power connected. Prior to any service, disconnect the power and use a voltmeter to ensure that there is no power to the system. Use approved lockout and tag-out procedures.

Confined Space

The StormVault Coalescing Media-pack Separator (SVCMS) separator is a confined space environment. Only properly trained personnel possessing the necessary safety equipment should enter the unit to perform maintenance or inspection procedures. Inspections of the internal components can, in most cases, be accomplished through access and observations hatches from the ground surface.

Never enter the SVCMS separator or any of its enclosed spaces without proper confined space entry training and approved equipment. See OSHA, Regulations for Permit-Required Confined Spaces 29 C.F.R. § 1910.146.
4. INTRODUCTION

The *StormVault Coalescing Media-pack Separator* (*SVCMS*) is a passive gravity-flow system for the separation of oil from Stormwater (SW) and wastewater (WW) runoff. The design utilizes the floatation, buoyancy force of oil due to its lighter specific gravity than water to produce enhanced coagulation and separation by the use of closely spaced corrugated plates.

The *SVCMS* separator is designed to process SW/WW runoffs under gravity flow conditions and provide coalescing treatment as a flow-through treatment process. The Coalescing Media-pack separator is typically deployed in a precast concrete vault or manhole structure, though other container materials are available to meet project specific requirements. The Coalescing Media-pack assembly is manufactured of oleophilic (oil loving); corrugated polypropylene (PP) plates stacked on top of each other.

The separator consists of a baffled pre-sedimentation chamber often referred to as the grit chamber. The SW/WW enters this grit chamber through a down spouted inlet, which is typically PVC piping. The inflow is distributed uniformly across the width of this chamber, upstream of the Coalescing Media-pack Assembly. The outlet and overflow piping fixture is located at the discharge side of the unit, downstream of the Coalescing Media-pack Assembly. The Coalescing Media-pack Assembly is mounted in a concrete baffle wall via a sliding mechanism, which seals the coalescing assembly against the stationary baffle wall and ensures that all of the oily influent water flows through the media-packs. See *Figure 1* for details.

The oil transported in the influent water, is typically somewhat mixed and usually in the form of droplets of various sizes. The oily water flows through the spacing between the corrugated PP plates as shown in *Figure 3*, following an upward and downward path. The rise of the oil droplets in the flow is governed by Stokes’ Law. The oil droplets rise due to their buoyancy, strike and adhere to the undersides of the plates. This also helps oil to coalesce and agglomerate into large size oil droplets, which eventually forms an oil film and creeps towards the surface through the openings as shown in *Figure 2* and are eventually separated from the media-packs. This separated oil is then absorbed by the Oil Sorbents mats and is separated from the SW/WW flow.

*Figure 2: Top view of Coalescing Media packs*
The Polypropylene (PP) plates used as Coalescing Media-pack is approximately 12-inches x 12-inches. The standard plate spacing provided by *Jensen* is typically 8-mm and 16-mm. The closer the spacing of these plates, the more efficient the separation of oil. However, extremely closely spaced plates are more prone to clogging and considerations should be taken for selecting the plate spacing. The stacks of Corrugated Media-packs are enclosed in a removable framework assembly that slides in the slots of the Fixed framework attached to the baffle wall.

Though the removal of oil is the primary objective of the *SVCMS* separators, fine sediment particles are also removed in this coalescing process. The presence of total suspended solids (TSS) in Stormwater/Wastewater discharges is also a primary water quality constituent of concern which can be effectively resolved by *SVCMS* separators.

The coarse and fine sediment particles settles on the floor of the inlet/grit chamber. The finer solids gets collected beneath the Coalescing Media-pack Assembly. The Coalescing Media-pack Assembly has been designed with a fine solids deposition zone immediately beneath the Media-pack assembly to ensure that these separated solids do not hinder the treatment flow path as they do in other coalescing systems, in which the deposition zone is in the treatment flow path.

As discussed above, captured oil agglomerates, coagulates on the surface of the outlet chamber, and fine and coarse solid material settles on the floor of the vault underneath the Coalescing Media-pack Assembly.
5. OPERATIONS

The StormVault Coalescing Media-pack Separator (SVCMS) unit is a passive gravity system. It should be initially filled with clean water prior to receiving Stormwater/wastewater inflows. The separator should be filled with clean water each time it is emptied to keep the outlet area from being contaminated with oil from the inlet area.

6. OPTIMIZING PERFORMANCE - CONSIDERATION POINTS:

I. The amount of debris, such as sand, gravel, dirt, leaves, wood, rags, etc., permitted to enter the SVCMS unit must be reduced for maximum effectiveness. Installation of an appropriately sized Collection Catch Basin or other similar device upstream of the SVCMS unit is recommended.

II. Detergents and solvents must not enter the SVCMS unit. The SVCMS unit will not remove chemical emulsions or dissolved hydrocarbons, and their presence retards the recovery of oils that would otherwise be separated.

III. Wastewater (WW) containing high concentrations of dissolved solids (such as untreated sanitary sewage) must be excluded due to their emulsifying tendency. WW which exhibits high Biological Oxygen Demand, Chemical Oxygen Demand, and Total Suspended Solids (TSS) may require additional treatment after the SVCMS unit.

IV. The location of your SVCMS unit should be in an area with sufficient truck access (top-side clearance) for waste removal and maintenance.

V. The SVCMS unit is the correct treatment process to remove free oil and fine sediments. For removing chemical or physical emulsions, dissolved hydrocarbons, solvents or Volatile Organic Compounds, installation of an appropriately sized filtration system equipped with Cationic Exchange media is recommended. However, SVCMS unit can be installed prior to the Filtration units as a pre-treatment unit.

VI. Waste oils, such as automobile and truck crank case oil, should not be intentionally drained into the SVCMS unit. Filling the SVCMS unit with waste oils adversely affects the performance. Waste oil should be dumped into a waste holding tank designated for proper disposal.

VII. The SVCMS unit needs to be maintained in a timely manner for proper removal of free, accumulated oil and settled sediment. A vactor truck is recommended for cleanout of the SVCMS unit. Suction removal of waste using a vactor truck, as needed, is the recommended method of maintenance, though oil sorbent mats is a good method as well for capturing the separated oil.
If the unit is situated such that gravity flow through the unit isn’t possible, the SVCMS unit will need a pump station to drive treatment flows through it. Any pumping facility should absolutely be located downstream of the SVCMS unit. Pumping should be restricted to the clean water layer below the surface oil and above the settled sludge on layer on the unit’s floor, from discharge, effluent end of the SVCMS unit.

It is strongly recommended that any treatment flow pumping is not implemented up-stream of the SVCMS unit. If pumping is implemented up-stream of the unit, the pump will mix the oil and water, increasing the emulsified and dissolved oil content and hamper the oil separation process.

If a pump must be installed upstream of the SVCMS unit, it should be a positive displacement pump (e.g. progressive cavity, diaphragm, sliding shoe), set at minimum flow rate or revolutions per minute (RPM) and installed as far upstream as possible to minimize the oil/water mixing and emulsification.

Piping to and from the SVCMS unit should be designed to minimize the turbulence and promote laminar flow.

The JCMS unit must be kept from freezing at all times. The SVCMS unit and piping should be installed below local frost levels. If necessary, a thermostatically controlled steam or electric heating device may be installed.
7. MAINTENANCE

I. For Stormwater application, during the rainy season, the StormVault Coalescing Media-pack Separator (SVCMS) unit should be inspected at least once every 30-days or after a significant rainfall event of 0.5-inches or higher or after a series of smaller rainfall events.

The settled solids should be removed from the grit chamber upstream of the Coalescing Media-pack Assembly as well as the area beneath the Coalescing Media-pack Assembly when the depth of the solids in either of these zones is more than 1-foot.

If floatables accumulate more rapidly than the settle-able solids, the floatables should be removed using a vactor truck or dip net before the floatable layer thickness exceeds 4 to 6 inches.

II. Cleanout of the SVCMS unit at the end of a rainy season is recommended because of the nature of pollutants collected and the potential for odor generation from the decomposition of organic material and hydrocarbons collected and retained in the SVCMS. This end of season cleanout will assist in preventing the discharge of “pore”, putrid water from the SVCMS separator unit during summer months.

III. For a routine cleanout, the inlet area or grit chamber of the SVCMS unit should be checked to determine if an excessive amount of solids exceeding 1-foot of depth have accumulated on the vault floor, and on the discharge side of the Coalescing Media-pack Assembly.

The removal of settled solids is necessary to prevent the accumulation of solids to a height that they plug either the inlet or the coalescing media-packs on the discharge side. When the treatment flow path through the media-packs becomes obstructed, blocked by solids and debris, efficiency will be reduced and hydrocarbons in the outlet water may exceed allowable limits.

IV. Clean the inlet anytime fouled conditions are observed. Clean as follows:
   a. Remove cover or open lids as appropriate.
   b. Remove, pump or vacuum the water from the vault.
   c. Remove any sludge accumulation from the grit chamber section as well as from beneath the Coalescing Media-pack Assembly on the discharge side.
   d. Note sludge quantity and depths in both the inlet/ grit chamber and beneath the Coalescing Media-pack Assembly.

If large quantity of solids have been accumulated and more in-depth cleaning is required, the Coalescing Media-pack Assembly has to be inspected and cleaned which can be done in place or removed and cleaned.
Before initiating any cleaning operations, influent flow into the unit should be stopped or diverted. The cleaning of the unit essentially consists of removing the floatables and Oil Sorbent Mats; drain or pump out the water from within the unit; and then removal of the fine and coarse solids from the grit chamber and the outlet chamber including underneath the Coalescing Media-pack Assembly. In general, the sediments collected underneath the Coalescing Media-pack Assembly is substantially finer in size than the material settled upstream in the grit chamber. The Coalescing Media-pack Assembly can be hosed down in place or hoisted out of the unit for cleaning if necessary.

**Cleaning When Coalescing Media-pack Assembly Remains in Place**

For cleaning the Coalescing Media-pack Assembly in place, first pump down the unit. After the unit is pumped down, connect a pressure water hose (at least 60-psig) to an extended cleaning wand so that the spray nozzle can be placed right at the entrance face of the Media-pack Assembly. The extended wand allows for the power flushing the Media-pack Assembly to flush out any clogging between the plates. As the water flushes the sediment out of the spacing between the plates into the downstream chamber of the unit, it should be removed by the vacuum hose and properly disposed.

A vacuum truck is the suggested means for collecting and disposing of the sludge and dirt from the vault when it is cleaned with the Coalescing Plate Assembly remaining in place. It should be noted that all free oil and grease separated from the water is coalesced and collected within the Oil Sorbent Mats which can be inspected for remaining adsorption capacity and replaced if necessary.

*Note: If desired, the water can be collected and recycled to the inlet of the separator later after cleaning.*

**Cleaning When Coalescing Aluminum Plate Assembly Removed**

The Coalescing Media-pack Assembly can be easily removed and cleaned separately. The Coalescing Media-pack Assembly weighs around 250-lbs and can me hoisted out of the vault with most forklifts. The Coalescing Media-pack Assembly can be removed from the vault per the “HOIST MOVES” notes on the clean out sketch in Appendix D of this Operations & Maintenance Manual.

Once the Coalescing Media-pack Assembly has been removed, hoisted out of the vault, flush the Coalescing Media-pack Assembly with a standard hose or power sprayer over a retention tub or position the Coalescing Media-pack Assembly over a sanitary sewer floor drain.

*DO NOT DISASSEMBLE the Coalescing Media-pack Assembly. Only handle it as a complete assembly.*

Use a hose to flush the vault and sweep or squeegee all sediment out of the drain connections. A standard hose at 10 to 15-gpm with spray nozzle at normal 50 to 80-psi domestic pressure, or the cleaning wand from a power sprayer can be used to clean the spacing between the plates.

Examine vault interior for damage and repair any damage to internal coating (if provided). Inspect oil
sorbent mats for remaining adsorption capacity and replace as necessary.

To restart unit, first re-install the Coalescing Media-pack Assembly back in the vault, by following the “HOIST MOVES” notes on the clean sketch in Appendix D of this Operation & Maintenance (O & M) Manual in reverse. Then, fill with clean water and open any valves that might have been closed so that water will flow through the unit.

*Note: The quantity of sludge found in the Inlet side/ grit chamber of the vault, should be used as a basis for determining the next interval before cleaning.*

If the sludge level is very low, say less than 3-inches, the cleaning interval can be extended. If the sludge layer is thicker, more than 9-inches in depth, the interval should be shortened.

**New Installations** – The condition of the unit should be checked after every runoff event for the first 30-days. The visual inspection should ascertain that the unit is functioning properly (no blockages or obstructions of the entrance and exit) by measuring the amount of solid materials that have accumulated in the grit chamber, the amount of fine sediment accumulated beneath the Coalescing Media-pack Assembly, and determining the amount of floating trash and debris in the grit chamber. This can be done with a calibrated “dip stick” so that the depth of deposition can be tracked. Schedules for inspections and cleanout should be based on storm events and pollutant accumulation.

Visually inspect the interior wall of the unit above the stationary baffle, on the upstream side, to note any water scum line that may indicate if the unit has been in bypass.

**Ongoing Operation** – During the rainy season, the unit should be inspected at least once every 30-days. The floatables should be removed and the solids removed from the floor when 1-foot in depth or greater in the grit chamber or beneath the Coalescing Media-pack Assembly.

If floatables accumulate more rapidly than the settle-able solids, the floatables should be removed using a vacor truck or dip net before the layer thickness exceeds one to two feet.

Cleanout of the *StormVault Coalescing Media-pack Separator (SVCMS)* unit at the end of a rainfall season is recommended because of the nature of pollutants collected and the potential for odor generation from the decomposition of material collected and retained. This end of season cleanout will assist in preventing the discharge of pore water from the *SVCMS* unit during summer months.

**Use of Sorbents** – It needs to be emphasized that the addition of sorbents does not necessarily increase the performance of the *SVCMS* unit. The properly sized Coalescing Media-Pack Assembly within the unit assures satisfactory removal of oil and grease. However, the addition of sorbents will enhance the solidification and retention of the oil and grease coalesced on the water surface.
Under normal operations, the SVCMS unit will provide effluent concentrations of oil and grease less than 15-parts per million (ppm or mg/L) for Stormwater application and 200-ppm for Wastewater application for all dry weather flows where the discharge flow is less than or equal to the SVCMS design flow.

During wet weather flows, a properly sized SVCMS unit can be expected to remove between 80% and 90% of the free oil and grease from the discharge flow.

_Jensen_ only recommends the addition of sorbents to the SVCMS unit if there are specific land use activities in the catchment watershed that could produce exceptionally large concentrations of oil and grease in the runoff; concentration levels well above typical amounts. If site evaluations merit an increased control of free oil and grease then oil sorbents can be added to the SVCMS separator to enhance solidification of the oil.

**Recommended Oil Sorbent Material**

The JCMS separator may be equipped with Rubberizer®, a Sorbent Solidifier™ that transforms spilled hydrocarbons into a rubber-like solid when it comes in contact. Rubberizer® sorbent mats that should be observed for color change as these are solid white when initially installed and will darken as they absorb oil and grease.

They are capable of retaining up to five times their weight in hydrocarbons; therefore, as they absorb oil they will darken in color from the bottom up. When the mats or pillows are floating low in the water and are solid dark brown or black they may need to be replaced. Refer to Rubberizer’s maintenance guidelines for further information. Often the mats will collect some sediments and dust. By pulling on the attachment lanyard and dunking the mats in the water, it can be observed if the mats are dirty or are saturated with oils and greases.

To remove the mats or pillows, find the lanyards attached to the access cover and pull the mats out utilizing a “sewer hook” or similar rod. Care should be taken in lifting the saturated mats out of the access way as they may weigh up to five times more than the replacement mats. Care should be taken with mats that are saturated with oil. Many state and local agencies have their own regulations regarding used oil and oil containing devices. Any material determined to be hazardous waste must be disposed of per applicable EPA Regulatory Citation, Statutory Citation (RCRA) requirements. Replacement mats or pillows can be obtained from Jensen Stormwater Systems or nearest Jensen Precast office.

The amount of sorbent to be added to the SVCMS unit’s chamber can be determined if sufficient information is known about the concentration of oil and grease in the runoff. Frequently the actual concentrations of oil and grease are too variable and the amount to be added and frequency of cleaning will be determined by periodic observation of the sorbents.

As an initial application, it is recommended that around 1 to 2 sorbent mats be added to the grit chamber and the outlet chamber of the SVCMS unit. The oil and grease loading of the sorbent material should be
observed after major storm events. Oil Sorbent material may also be furnished in pillow or boom configurations.

The sorbent material should be replaced when it is fully discolored by skimming the sorbent from the surface. The sorbent may require disposal as a special or hazardous waste, but will depend on local and state regulatory requirements.

**Disposal**

Standard vactor operations should be employed in the cleanout of the unit. Disposal of material from the SVCMS unit should be in accordance with the local municipality’s requirements.

Disposal of the decant liquid/material to a Publically Operated Waste Water Treatment Plant is recommended. Field decanting to the storm drainage system is not recommended, unless through a proven fine filtration process.
JENSEN STORMWATER SYSTEMS
Annual Record of Operation and Maintenance
StormVault Media-Pack Separator, Model: SVCMS-x-xx

Owner ___________________________________________________________
Address ________________________________________________________________________________________
Owner Representative __________________________________ Phone ________________________________

SVCMS INSTALLATION:
Model Designation ___________________________________ Date ___________________________
Site Location _____________________________________________________________
Depth from cover to bottom of the tank ____________________________________________

INSPECTIONS:

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<td>Beneath Coalescing Plates</td>
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OBSERVATIONS OF FUNCTION: ____________________________________________________________
                                                                                          
                                                                                          

CLEANOUT:

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COALESCING MEDIA-PACK ASSEMBLY MAINTENANCE

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OBSERVATIONS OF FUNCTION: ____________________________________________________________
                                                                                          
                                                                                          

CERTIFICATION: _________________________ TITLE: ________________________ DATE: _____________
APPENDIX B

SITE LOCATION PLANS
APPENDIX C

PLAN & PROFILE DRAWINGS
APPENDIX D

CLEAN OUT DETAIL

SKETCH/DRAWINGS
APPENDIX E

BROCHURE INFORMATION – CLEARTECH RUBBERIZER OIL SORBENT MATS
OVERVIEW

ClearTec™ Rubberizer® technologies are well suited to handle the challenges that face sensitive coastline, marshlands, marinas and much more. Our ClearTec™ Rubberizer® EPA approved particulate is field proven and has been a source for hydrocarbon based disaster remediation for over 20 years. ClearTec™ Rubberizer®’s worldwide customer base includes Fish & Game agencies, US Coast Guard, US Navy, SeaCor, SDG&E, SeaTow, Jensen Precast and Exxon Corporation.

Our family of products are unique in the industry due to their ability to address conditions ranging from sheen removal to heavy material (tarball) solidification. The products also allow a broad range of applications and are approved for use in marsh and wetlands as well as in open bodies of water including lakes and oceans.

We also address concerns in handling hazardous material and waste stream disposal. Our technologies not only absorb hazardous material but also solidify them in allowing a single waste stream of contaminated material for remediation. ClearTec™ Rubberizer® is the only solution that eliminates the disposal of dangerous used material. Our “cradle to grave” handling eliminates the need for hazmat material storage and the long term effects of liquid hazmat in the environment.

ADVANTAGES

Along with the safety in using the ClearTec™ Rubberizer® technologies, the company also gives back to the communities in which our products are deployed. Our saturated and solidified booms, mats, and particulates are shipped back to ClearTec™ Rubberizer® Global approved facility using the same containers in which they were deployed. We convert the spent products using our “waste to energy” process that is approved by the EPA to generate electricity. The energy creation is 2.35x more per short ton than coal with approximately1/100th of the environmental impact.

ADVANTAGES

The key advantages of the ClearTec™ Rubberizer® Product Line when compared to many of the characteristics of the more conventional products include:

- Works on land or water borne spills
- Remains buoyant
- Solidifies and is landfill approved
- Resistant to leaching
- Does not release solidified oils under pressure
- Incinerates with less than .1% residual ash
- Reduces overall clean-up time
- Reduces overall costs

APPLICATION

ClearTec™ Rubberizer® products sorb and transform into a rubber-like material many petroleum products including:

- Gasoline
- Jet Fuel
- Diesel Fuels
- Transformer Oils
- Hydraulic Oils
- Lube Oils
- Aromatic Solvents
- Chlorinated Solvents
- Light Crude and many other compounds...
THE TECHNOLOGY

ClearTec™ Rubberizer® products are available in a variety of water treatment and filtration medias in order to meet the needs of today’s demanding environmental incidence responses. The advanced technologies are formulated from modern non-toxic, non-hazardous polymers capable of high sorption efficiencies. The filtration media kits absorb and solidify a wide variety of fuels, oils, chlorinated solvents including paraffins, benzene, toluene, ethylbenzene, xylene (BTEX), trichloroethylene (TCE), and polychlorinated biphenyls (PCB). These filtration applications can save material costs, labor, and disposal volume by as much as 75%.

CLEARTEC PARTICULATE™

ClearTec™ Rubberizer® Particulate is a mixture of hydrocarbon polymers plus additives resulting in a grainy material used in various cleanup operations. However, it is also used for clarification of emulsions, or solidification and removal of various petroleum-based slicks from the surface of water. The CTP Particulate (also used in booms and pillows as the filler) exhibit characteristics that include:

**Light weight**: CTP is made of a light weight polymer that enables rapid deployment and retrieval.

**Hydrophobic**: CTP has no affinity for water and is permanently buoyant both before and after sorption.

**Stable**: CTP will not release sorbed solidified liquids, even under landfill pressures, and are extremely resistant to release of sorbed solidified liquids upon aqueous contact.

**Efficient**: CTP has low volume increases of sorbed liquids (15% in laboratory test, 25% in field applications). One pound of CTP will solidify up to 2/3 of a gallon of jet fuel, diesel, gasoline, transformer oil and other liquids into a rubber-like material.

CLEARTEC PILLOWS™

ClearTec™ Rubberizer® Pillows are made with particulate as a filter and a 100% polypropylene tubular fabric encasement. They can be used to catch drips and leaks or for bulk clean-up, and in sumps for emulsion clarification. Pillows are 12” by 12” and will sorb and solidify up to one gallon each.

CLEARTEC BOOM™

ClearTec™ Rubberizer® Booms are made with CTP Particulate as a filler and a 100% polypropylene tubular fabric encasement. Boom connectors are also provided for boom to boom linking and response for larger spills requiring multiple booms for containment and collection. CTP Booms are multifunctional and can be used for mitigation on water while sorbing the spill. Once fully saturated, they continue to function as containment barriers and remain significantly above water level for maximum effectiveness. CTP Booms are soft and conform well to textured surfaces enabling them to act as containment barriers on airport runways or vehicle roadways. Booms can also be used for bulk cleanup operations.

Once sorbed liquids are solidified (usually within 20 minutes) they are retrievable without loss of their contents caused by handling and the consequent dripping associated with many other products.

CTP Booms are supplied in various lengths and range in diameter from 1” to 5”. Five inch diameter booms can sorb and solidify up to one gallon of spilled material per lineal foot.

To Order:
(619) 618-1385
sales@cleartecglobal.com
www.cleartecglobal.com
Contains.

Absorbs.

Solidifies.
ClearTec Rubberizer® Pillows

ClearTec Rubberizer® Pillows are made with particulate as a filler and a 100% polypropylene fabric encasement. They can be used to catch drips and leaks, clean up large spill areas, or be placed in sumps for emulsion clarification. Standard size pillows are 12” by 12” and will sorb and solidify up to one gallon each. They exhibit characteristics that include:

- **Single Waste Stream**: ClearTec Rubberizer® Pillows contain, absorb and solidify which allows for easy disposal.
- **Permanently Buoyant**: ClearTec Rubberizer® Pillows remain buoyant even once hydrocarbons are fully sorbed and solidified.
- **Leach Resistant**: ClearTec Rubberizer® Pillows are retrievable without loss of their contents caused by handling and consequent dripping.
- **Versatile**: ClearTec Rubberizer® Pillows are equally effective on land or water borne spills.

ClearTec Rubberizer® Mats

The advantage of the ClearTec Rubberizer® Mat over a boom or pillow is the large surface areas which the mat covers. They can be used as sweeps for fuel pits or on puddles, lakes, rivers, bays, and other areas of pooling water with oil contamination problems. They are designed to absorb and solidify up to 3/4 gallon of hydrocarbons per square foot. They are constructed from high-strength fiberglass mesh screen and contain ClearTec Rubberizer® Filter Media as a filler. They are available in a variety of sizes and can be customized to fit virtually any situation. They exhibit characteristics that include:

- **Single Waste Stream**: ClearTec Rubberizer® Mats contain, absorb and solidify which allows for easy disposal.
- **Permanently Buoyant**: ClearTec Rubberizer® Mats remain buoyant even once hydrocarbons are fully sorbed and solidified.
- **Versatile**: ClearTec Rubberizer® Mats have ribbon loops so multiple mats can be tethered together to cover virtually any spill area.
- **Leach Resistant**: ClearTec Rubberizer® Mats are retrievable without loss of their contents caused by handling and consequent dripping.