



Manufacturer's Recommended Installation Processes for

C.I.Agent® Barrier Boom Containment System



FULL CONTAINMENT - BACK TO GRADE METHOD

If the subsoil around the area to be contained is sandy or non-impervious, you may need a liner for full protection.



1. Materials needed: rebar or wooden stakes, hammer, staple gun or screws and screw driver, rake, shovel, string and C.I.Agent® Barrier Boom. Optional equipment: a small trench digger, 10 foot angle iron and granular Bentonite®.



2. Dig a trench around the perimeter of the substation. Depth and width depends on your particular application of Barrier Boom. For this method, the Barrier Boom must be below grade level.



3. Inside the trench, string a line from one side of the trench to the other to keep the stakes and Barrier Boom straight.



4. Position stakes or rebar every 10 feet inside the trench. Roll out the C.I.Agent® Barrier Boom beside trench. The **BLACK** fabric side of the Barrier Boom must be up.



5. Optional: Granular Bentonite® can be placed in the trench to form a seal between the ground and the Barrier Boom.



6. Stand the Barrier Boom up against the stake and staple or screw near the top of the Barrier Boom. If using rebar, lean Barrier Boom against it. **Black fabric side to face the inside.**



7. Stakes are trimmed off to ground level. Carefully dump clean stone in the trench and around the Barrier Boom being careful not to crush the boom. If using rebar, pull it out of the ground once clean stone is around the boom.



8. A 10 foot angle iron can be used to deflect the stone during the fill process. Rest the angle iron on the stakes or rebar and pull the angle iron to the next support during filling.



10. Cover area with clean stone and rake until the Barrier Boom is completely covered.

FULL CONTAINMENT - DIKE METHOD

If the subsoil around the area to be contained is sandy or non-impervious, you may need a liner for full protection.



1. Materials needed: rebar or wooden stakes, hammer, staple gun or screws and screw driver, rake, shovel, string and C.I.Agent® Barrier Boom. Optional equipment: a small trench digger, 10 foot angle iron and granular Bentonite®.



2. Dig a trench around the perimeter of the substation. Depth and width depends on your particular application. In the Dike method, the Barrier Boom raises above ground level.



3. Position stakes or rebar every 10 feet inside the trench. Roll out C.I.Agent® Barrier Boom beside trench. The **BLACK** fabric side of the Barrier Boom must be up.



4. Stand the Barrier Boom up against the stake and staple or screw near the top of the Barrier Boom. If using rebar, lean Barrier Boom against it. **Black fabric side to face the inside.**



5. Granular Bentonite® can be put in the trench at the bottom of the Barrier Boom. Carefully dump clean stone in the trench around the boom being careful not to crush the boom. An angle iron can be used to protect the Barrier Boom. Notice the boom is above ground level.



6. The clean stone forms a mound over the Barrier Boom.



7. Cover the area with clean stone and rake until the Barrier Boom is completely covered.

EQUIPMENT CONTAINMENT - DIKE METHOD



1. Materials needed: rebar or wooden stakes, hammer, staple gun or screws and screw driver, rake, shovel, string and C.I.Agent® Barrier Boom. Optional equipment: a small trench digger, 10 foot angle iron and granular Bentonite®.



2. Dig a trench around the perimeter of the equipment. Depth and width depends on your particular application. In the Dike method, the Barrier Boom raises above ground level.



3. Position stakes or rebar every 10 feet inside the trench. Place C.I.Agent® Barrier Boom inside the trench with the **BLACK** fabric side of the boom facing inside. Staple to stakes or lean against rebar.



4. Granular Bentonite® can be put in the trench at the bottom of the Barrier Boom. Carefully dump clean stone in the trench around the boom being careful not to crush the boom. Notice the mound that is being created over the Barrier Boom.



5. The C.I.Agent® Barrier Boom around this transformer provides complete protection should a spill occur.

ADDITIONAL INFORMATION

C.I.Agent Barrier Booms can be used in a variety of applications that may not be illustrated in this manual. If you have a particular need or application, please contact the corporate office at 866-242-4368.

Product and Pollution Insurance

C.I.Agent Solutions® is so confident in the quality and performance of its products that they are backed by a \$2 Million Pollution Insurance and a \$2 Million Product Liability Policy. C.I.Agent Solutions' products are manufactured under quality controlled conditions at our facility in Louisville, Ky. Testing of products is performed in our in-house lab as well as by independent third-party laboratories. Documented results on the performance of C.I.Agent Solutions' products can be found in Case Studies and testimonials on our website at www.ciagent.com.

Upon request, after the purchase of our product(s), C.I.Agent Solutions will provide a Certificate of Co-Insurance.

WARRANTY

C.I.Agent Solutions®, LLC warrants to the purchaser of its products, that the C.I.Agent® Oil Containment and/or Hydrocarbon Filtration System for which the customer received this warranty was designed, developed, and/or fabricated using all due reasonable commercial care and good manufacturing practices. C.I.Agent Oil Containment and/or Hydrocarbon Filtration System shall be free from defects in material and workmanship.

C.I.Agent Solutions further warrants the performance of their C.I.Agent Oil Containment and/or Hydrocarbon Filtration System to prevent the release of hydrocarbons due solely to the failure of the materials and workmanship of the product. The performance warranted herein is contingent upon the installation of the C.I.Agent Oil Containment and/or Hydrocarbon Filtration System being performed under the direct supervision of a C.I.Agent Solutions Factory Representative and/or a C.I.Agent Solutions Factory Certified Contractor. Said performance warranted herein is further contingent upon each C.I.Agent Oil Containment and/or Hydrocarbon Filtration System being installed in strict accordance with the C.I.Agent Solutions' Installation Manual, supported by a step-by-step photographic documentation of the installation to be sent to C.I.Agent Solutions upon completion of the installation.

Upon receipt and review of the photographic installation documentation, C.I.Agent Solutions will issue to the Customer a Certificate for Pollution Insurance in the amount of \$2,000,000 to address the cost of clean up solely related to the performance of the C.I.Agent Oil Containment and/or Hydrocarbon Filtration System as warranted herein.

C.I.Agent Solutions' sole obligation under this warranty is to repair or replace the product as warranted herein, at C.I.Agent Solutions' option. Repair or replacement shall not apply to products that have been expended, damaged, or consumed during the capture or filtration of hydrocarbons from sources they were designed to contain and/or filter. C.I.Agent Solutions must be notified in writing of any claim under this warranty within 30 days of any claimed lack of conformity of the Product.

Warranty Limitations — In no event shall C.I.Agent Solutions be liable for any loss, inconvenience or damage, whether direct, incidental, consequential or otherwise, resulting from breach of any expressed or implied warranty or condition, of fitness for a particular purpose or otherwise with respect to this product, except as set forth herein. This warranty is not to confer any additional legal, jurisdiction or warranty rights to the customer other than those set forth herein.

Warranty Exclusions — It is the customer's responsibility to regularly examine the Product to determine if damage has occurred during the normal operation and/or maintenance of equipment at the site of the C.I.Agent Oil Containment and/or Hydrocarbon Filtration System installation to determine the need for repair or replacement. This warranty does not cover the following:

Products that have been modified, neglected, misused, abused, or damaged by natural disasters.

Damage to the Product resulting from improper use or occurrence during the normal operation and maintenance of equipment at or near the Product.



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