# Application for Permit to Operate

(For Use With All Systems Except Field Constructed or Airport Hydrant Systems)

**UST Management Division**

(This form may be used to comply with SC UST Regulation 280.23(b))

## I. REGISTRATION AND SITE INFORMATION

<table>
<thead>
<tr>
<th>Facility Name</th>
<th>SCDHEC Permit Identification Number</th>
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<tbody>
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<table>
<thead>
<tr>
<th>Physical Street Address</th>
<th>City</th>
<th>County</th>
<th>Facility Telephone Number</th>
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## II. TANK INFORMATION

<table>
<thead>
<tr>
<th>Tank Number (list each compartment separately)</th>
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<tbody>
<tr>
<td>Capacity (gallons)</td>
<td></td>
</tr>
<tr>
<td>Serial Number of Tank</td>
<td></td>
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<tr>
<td>Construction Material (check one)</td>
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</tr>
<tr>
<td>Fiberglass-Reinforced Plastic (FRP)</td>
<td></td>
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<tr>
<td>Steel-FRP Composite</td>
<td></td>
</tr>
<tr>
<td>Steel-Polyurethane</td>
<td></td>
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<tr>
<td>Other (specify)</td>
<td></td>
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<tr>
<td>Containment (check one)</td>
<td></td>
</tr>
<tr>
<td>Double Wall-Brine</td>
<td></td>
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<tr>
<td>Double Wall-Vacuum</td>
<td></td>
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<tr>
<td>Double Wall-Dry</td>
<td></td>
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<tr>
<td>Other (specify)</td>
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</tbody>
</table>

Is the tank information provided identical to the information submitted on the Application for the Permit to Install?  Yes [ ] No [ ]

Tank Manufacturer: ________________________________  Model: ________________________________

Were any tanks or compartments manifolded? ________________________________

## III. INSTALLATION PROCEDURES

All underground storage tank systems must be installed and operated per R.61-92, Part 280: UST Control Regulations, manufacturer’s instructions and industry standards. Please indicate which standard(s) was used to oversee the tank system installation (check all that apply):

IV. TANK INSTALLATION INFORMATION

Backfill/Overburden:
The backfill should be a clean, washed, well granulated, free-flowing, non-corrosive inert material that is free of debris, rock or other organic materials. Examples of accepted materials are sand, crushed rock (no larger than ½ inch), or pea gravel (no larger than ¾ inch).

Type of backfill used: Sand [   ] Pea Gravel [   ] Crushed Rock [   ] Other [   ]

Amount of backfill under tanks (Minimum of 12 inches required): ________________________________

Was backfill tamped under lower quadrant of tanks to fill any potential voids? Yes [   ] No [   ]

If sand backfill was used, was it compacted to ensure adequate support of tank and prevent settlement? Yes [   ] No [   ]

If yes, indicate the method of compaction that was used: Sand-Slurry Method [   ] Mechanical [   ] Other (specify): _________

Are tanks located in a traffic area? Yes [   ] No [   ]

If yes, how much overburden was used? (choose one)
[   ] At least 2.5 feet of compacted backfill and 6 inches of asphalt paving
[   ] At least 1.5 feet of compacted and 8 inches of reinforced concrete

If no, how much overburden was used? (choose one)
[   ] At least 2 feet of compacted backfill
[   ] At least 1 foot of compacted backfill plus 4 inches of reinforced concrete

Does concrete or asphalt extend to at least one foot beyond the tank outline? Yes [   ] No [   ]

Tank Condition:

Was there a pressure change of greater than +/- 5” Hg between shipping and installation? Yes [   ] No [   ]

If yes, were repairs made? Yes [   ] No [   ]

Was there any damage to the tank(s) during installation? Yes [   ] No [   ]

If yes, was the damage repaired? Yes [   ] No [   ]

Excavation Dimensions:

Indicate the horizontal clearance for the following (at least 12 inches is required for steel tanks or 18 inches for fiberglass tanks):

Excavation walls: ________________________________________ Other tanks: ________________________________

Were the side walls of the excavation sloped or shored? Yes [   ] No [   ]

Does the distance from the top of the tank to final grade exceed tank diameter for steel or composite tanks? Yes [   ] No [   ]

Does the distance from the top of the tank to final grade exceed 7 feet for fiberglass tanks? Yes [   ] No [   ]

Anchoring System:

Was water encountered during installation? Yes [   ] No [   ]

Was an anchoring system used? Yes [   ] No [   ]

If yes, indicate the system that was used: __________________________________________________________

V. PIPING INFORMATION

Product Line (list each product line separately)

<table>
<thead>
<tr>
<th>Material of Construction (check one)</th>
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<tbody>
<tr>
<td>Flexible</td>
</tr>
<tr>
<td>Fiberglass Reinforced Plastic (FRP)</td>
</tr>
<tr>
<td>Other (Specify)</td>
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</tbody>
</table>

Containment (check one)

| Double Wall                        |
| Other (specify)                    |

Example: Compatible chase pipe

SCDHEC, UST Management Division, 2600 Bull Street, Columbia, SC 29201, PHONE (803) 898-0589 FAX (803) 898-0673 45 www.scdhec.gov

DHEC 1959 (12/2018)
V. PIPING INFORMATION (CONTINUED)

Pumping System (check one per product line)

<table>
<thead>
<tr>
<th>Pressurized</th>
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<table>
<thead>
<tr>
<th>Suction – Foot Valve</th>
</tr>
</thead>
</table>

| Suction – Angle Valve
Indicate location: |
|---------------------|

<table>
<thead>
<tr>
<th>Suction – Vertical Check Valve</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Other (Specify)</th>
</tr>
</thead>
</table>

Is the piping information provided identical to the information submitted on the Application for the Permit to Install?  Yes [ ]  No [ ]

Piping Manufacturer: ______________________________________________________  Model: _____________________________________

Any lines manifolded? Yes [ ]  No [ ]  If yes, please list lines that were manifolded: ______________________________________________

VI. PIPING INSTALLATION INFORMATION

Backfill/Overburden:
The backfill should be a clean, washed well-granulated, free-flowing, non-corrosive inert material that is free of debris, rock or other organic materials. Examples of accepted materials are sand, crushed rock (no larger than ½ inch), or pea gravel (no larger than ¾ inch).

Type of backfill to be used:  Sand [ ]  Pea Gravel [ ]  Crushed Rock [ ]  Other [ ] ___________________________________

Indicate the amount of spacing used for the following:
Below all piping: __________  Above all piping: _________  Between piping and sidewalls (minimum of 6 inches): __________
Between adjacent piping (minimum of twice the pipe diameter): ____________________________________________________

If sand backfill was used, was it compacted to ensure adequate support of tank and prevent settlement?  Yes [ ]  No [ ]
If yes, please indicate the method of compaction that was used:  Sand-Slurry Method  [ ]  Mechanical  [ ]  Other (specify): _________

Is piping located in a traffic area?  Yes [ ]  No [ ]
If yes, how much overburden was used?
[ ]  At least 6 inches of compacted backfill and additional backfill plus enough paving to equal 18 inches of material from the top of the piping to the bottom of the grade
If no, how much overburden was used?
[ ]  At least 2 feet of compacted backfill
[ ]  At least one foot of compacted backfill plus 6 inches of reinforced concrete

Piping Condition:
Was there any damage to the piping during installation?  Yes [ ]  No [ ]
If yes, was the damage repaired?  Yes [ ]  No [ ]

Excavation:
Is all piping sloped to at least 1/8 of an inch per foot from the dispenser(s) to the tank(s)?  Yes [ ]  No [ ]
If no, supply written manufacturer approval or reasoning.
Does the piping pass over the tank(s) at any point?  Yes [ ]  No [ ]
Are all product lines located in the same trench?  Yes [ ]  No [ ]
Was sufficient clearance allowed between other structure (water lines, conduit, etc) and the piping? Yes [ ]  No [ ]
Was the trench cleared of debris and obstructions prior to backfilling? Yes [ ]  No [ ]

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DHEC 1959 (12/2018)
VII. SPILL PREVENTION, OVERFILL PREVENTION, AND OTHER EQUIPMENT

**Spill Prevention Equipment:**
Manufacturer: ________________________________  Model: _______________________________  Capacity: ____________________  
Type of spill prevention equipment being installed: Single Wall [ ] Double Wall [ ]  
If double wall spill prevention is being installed, will the interstice be monitored monthly? Yes [ ] No [ ]  
If yes, please indicate the monthly monitoring method to be used: ____________________________________________________  
Surface mounded to channel water away from the spill prevention equipment? Yes [ ] No [ ]

**Overfill Prevention Equipment:**
Drop Tube Shut Off Valve [ ] Alarm [ ] Other (specify): ____________________________________________________  
Manufacturer: ________________________________________________  Model: ____________________________________________  
Do the drop tubes extend to within 6 inches of the bottom of the tank? Yes [ ] No [ ]
Was a secondary overfill prevention method installed? If yes, please indicate type: ___________________________________________  
If yes, was the secondary method installed so as not to impact the functionality if the primary method? Yes [ ] No [ ]

**Tank Top Sumps:**
Manufacturer: ________________________________________________  Model: ________________________________  
Type of containment installed: Single Wall [ ] Double Wall [ ]  
If double wall containment was installed, will the interstice be monitored monthly? Yes [ ] No [ ]  
If yes, please indicate the monthly monitoring method: ____________________________________________________  
Were all entry and exit points confirmed to be tight and secure? Yes [ ] No [ ]  
*Note:* The monthly monitoring of the interstice between the primary and secondary wall of a dispenser sump does not constitute release detection for the piping. You must also incorporate monthly interstitial monitoring for the piping.

**Under Dispenser Containment:**
Manufacturer: ________________________________________________  Model: ________________________________  
Type of under dispenser containment installed: Single Wall [ ] Double Wall [ ]  
If double wall under dispenser containment was installed, will the interstice be monitored monthly? Yes [ ] No [ ]  
If yes, please indicate the monthly monitoring method to be used: ____________________________________________________  
Were all entry and exit points confirmed to be tight and secure? Yes [ ] No [ ]  
*Note:* The monthly monitoring of the interstice between the primary and secondary wall of a dispenser sump does not constitute release detection for the piping. You must also incorporate monthly interstitial monitoring for the piping.

**Transition Sumps:**
Were transition sumps installed? Yes [ ] No [ ]  
If yes, indicate the location on the as built map.  
For emergency generators/marinas: Is a transition sump installed at the point where the piping becomes aboveground? Yes [ ] No [ ]

**Vapor Recovery:**
Was Stage 1 vapor recovery installed? Yes [ ] No [ ]  
If yes, indicate which tanks: ________________________________
VIII. RELEASE DETECTION

Double Wall systems must use interstitial monitoring as the primary method for tank and line release detection. When considering your installation, you must decide whether you will be installing a closed system, open system, or a Department approved combination. Please see the descriptions of the requirements for each below. The system that you choose will be inspected for compliance with the requirements listed prior to issuing a permit to operate. In addition, per SC UST Regulation 280.40(a)(4), you must provide certification that your release detection methods used meet the required standards as set forth by the manufacturer.

Open System
**Submersible turbine pump sump (STP)** - the piping interstice must be open at the low point sump of the piping run, with a sump sensor being installed at the lowest point of the containment sump.

**Under dispenser containment (UDC)** - all interstice access points are open without any obstructions. Monthly visual monitoring or sensor monitoring would be allowed on all sumps because the open access points allow liquid to flow freely from sump to sump reaching the lowpoint sump sensor, typically located at the STP.

Closed System
**Submersible turbine pump sump (STP)** - the piping interstice must be open at the low point sump of the piping run, with a sump sensor being installed at the lowest point of the containment sump.

**Under dispenser containment (UDC)** - all interstice access points are closed and are continuous throughout the entire piping run with a sump sensor properly installed at the lowest point of each containment sump. Crossover tubing may be utilized to maintain interstice continuity. Leaks from the buried portions of the piping will be forced under pressure to the low point STP sump via the continuous piping interstice for detection. Because this system isolates other secondary containment sumps (dispenser and transition sumps) from the low point sump, typically at the STP, sensors are required to detect a leak before it exceeds the capacity of any sump.

### Release Detection

<table>
<thead>
<tr>
<th>Tank(s)</th>
<th>Piping</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interstitial Monitoring with Secondary Containment</strong></td>
<td><strong>At Dispensers</strong></td>
</tr>
<tr>
<td>Tank Sensor Manufacturer:</td>
<td>All interstices are open:</td>
</tr>
<tr>
<td></td>
<td>Yes [ ] No [ ] N/A [ ]</td>
</tr>
<tr>
<td></td>
<td>Indicate if visual monitoring or sensors is being used:</td>
</tr>
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<td></td>
<td><strong>OR</strong></td>
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<td></td>
<td>All interstices are closed but continuous:</td>
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<td></td>
<td>Yes [ ] No [ ] N/A [ ]</td>
</tr>
<tr>
<td></td>
<td>If sensor(s) are used, are they connected to an ATG:</td>
</tr>
<tr>
<td></td>
<td>Yes [ ] No [ ] N/A [ ]</td>
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<tr>
<td></td>
<td>If sensors are used, are they equipped with positive shut off?</td>
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<tr>
<td></td>
<td>Yes [ ] No [ ] N/A [ ]</td>
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<tr>
<td></td>
<td>Is an audible alarm being used?</td>
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<tr>
<td></td>
<td>Yes [ ] No [ ] N/A [ ]</td>
</tr>
<tr>
<td></td>
<td>Dispenser Sensor Manufacturer:</td>
</tr>
<tr>
<td></td>
<td>Dispenser Sensor Model:</td>
</tr>
<tr>
<td></td>
<td><strong>Was a high flow STP installed?</strong></td>
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<td></td>
<td>Yes [ ] No [ ]</td>
</tr>
<tr>
<td></td>
<td><strong>Electronic line leak detector in-line:</strong> Yes [ ] No [ ] N/A [ ]</td>
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<tr>
<td></td>
<td>In-line mechanical line leak detector, sump sensor at lowest point of liquid tight containment sump AND positive shutdown of STP: Yes [ ] No [ ] N/A [ ]</td>
</tr>
<tr>
<td></td>
<td>In-line mechanical line leak detector, sump sensor at lowest point of liquid tight containment sump AND visual or audible alarm: Yes [ ] No [ ] N/A [ ]</td>
</tr>
</tbody>
</table>

**Note: Please also indicate the sensor locations as applicable on your attached site map for review and approval.**
IX. INSTALLATION CERTIFICATION

All owners and operators must ensure that one or more of the following methods of certification, testing, or inspection was used.

[ ] The installer is certified by tank and piping manufacturers.
   Name of installer:____________________________________________________________________________________________
   Contact person, email address and telephone number: ______________________________________________________________

   Associated certifications:______________________________________________________________________________________

[ ] The installation has been inspected and certified by a SC registered professional engineer with education and experience in underground storage tank system installation (attach report).

[ ] The correct notification requirements have been followed and the installation has been inspected and approved by a representative of the UST Management Division.

[ ] All work listed in the manufacturer’s installation checklists has been completed.

X. SUPPLEMENTAL INFORMATION

Tank and piping manufacturers’ installation checklists attached? Yes [ ] No [ ]

Testing results for tanks, lines, leak detectors, sensors, spill prevention equipment, overfill prevention equipment, piping interstice, and containment sumps attached? Yes [ ] No [ ]

Note: The spill prevention and containment sump testing conducted at installation satisfies the requirements outlined in 280.35. The next test will be due 3 years from the initial test date.

Was tank testing completed at 90 or 95% capacity, as applicable? Yes [ ] No [ ]

“As-Built” map with all UST system components attached? Yes [ ] No [ ]

Note: The As built map should contain the following: structures, roads, dispensers, entire piping runs, sensor locations as applicable, and transition sums as applicable.

Was product introduced to ballast the tanks? Yes [ ] No [ ]

   If yes, was the required written notification received prior to the introduction of the product into the tanks? Yes [ ] No [ ]

   If yes, were daily stick readings taken until such time as interstitial monitoring was operational? Yes [ ] No [ ]

   If yes, please attach stick readings to this application review.

Current financial responsibility documentation on file? Yes [ ] No [ ]

Phase 1 and 2 installation inspections have been conducted by the UST Division? Yes [ ] No [ ]
XI. NOTES OR ADDITIONAL INFORMATION

___________________________________________________________________________________________________________________
_________________________________________________________________________________________________________
_________________________________________________________________________________________________________
_________________________________________________________________________________________________________
_________________________________________________________________________________________________________
_________________________________________________________________________________________________________

XII. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information and installing the UST system, I believe that the submitted information is true, accurate, and complete.

<table>
<thead>
<tr>
<th>Name of tank owner or owner’s authorized representative (print)</th>
<th>Title</th>
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<tbody>
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Signature       Date

<table>
<thead>
<tr>
<th>Name of installer (print)</th>
<th>Title</th>
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</table>

Signature       Date

XIII. State Use Only

Date Permit to Operate Application Received:_______________________________________________________________

Phase 1 and 2 completed: Yes [  ] No [  ]

Phase 3 Scheduled: Yes [  ] No [  ]

Name of contact person with whom the Phase 3 was scheduled: ________________________________________________

Date of Phase 3:                                                                                           

Person Conducting Phase 3 installation Inspection: __________________________________________________________

Date Permit to Operate is approved:______________________________