

# UST-20

# Alternative Fuel Compatibility Checklist



**Instructions:** This form is to be used to notify NC DENR that UST systems are compatible with ethanol blends greater than 10% or biodiesel blends greater than 20%. This form must be submitted **prior** to conversion from a conventional motor fuel to an ethanol blend greater than 10% ethanol content or a biodiesel blend greater than 20% biodiesel content to the following address:

**NC DEPARTMENT OF ENVIRONMENT & NATURAL RESOURCES, DIVISION OF WASTE MANAGEMENT / UST SECTION**  
**1637 MAIL SERVICE CENTER, RALEIGH, NC 27699-1637**  
**PHONE (919) 733-8303 FAX (919) 715-1117 [www.wastenotnc.org](http://www.wastenotnc.org)**

Sections I, II, and VII are to be completed by the UST owner/operator. Sections III through IV and V and/or VI of this form are to be completed by a UST Equipment Contractor and/or licensed Professional Engineer (PE). Complete one form for each UST system that will be storing the ethanol or biodiesel blend fuel. Keep a copy of this form and all supporting documentation for your records to be made available for inspection.

For equipment items below that have manufacturer approved checked, you must provide copies of the applicable documents from the manufacturer stating the approval for use with the ethanol or biodiesel concentration to be stored. If the manufacturer provides a warranty for the item, then you must provide a copy of the manufacturer's warranty that states the component is warranted for use with that concentration of alternative fuel blend.

If any component is not Underwriters Laboratory (UL) listed or manufacturer approved for use with ethanol blend fuels greater than 10% or biodiesel blends greater than 20%, then the ethanol or biodiesel blended fuel can not be stored and/or dispensed from the UST system. For components that are not UL listed or manufacturer approved, a compatibility analysis can be conducted by a Professional Engineer (PE) who has knowledge and experience in materials science. For any components that are determined compatible, using a compatibility analysis, the PE will have to complete the appropriate sections and sign and seal this form.

For "Tank Material" in Section III, if the tank is a steel tank that has not been internally lined, write "steel" in the "manufacturer" box. UL, Manufacturer, or PE approval is not required.

For "Pipe Material" in Section IV, if the piping is steel, write "steel" in the "manufacturer" box. UL, Manufacturer, or PE approval is not required.

Write "NA" in the manufacturer box if the UST system does not have a particular component on the list.

**Please note that the Fire Marshal must be notified prior to dispensing ethanol blend fuels.**

| I. Ownership of Tanks  |               | II. Location of Tanks |               |
|--|---------------|-----------------------|---------------|
| Owner's Name (Corporation, Individual, Public Agency or Other Entity): |               | Facility Name:        | Facility ID#: |
| Contact Person for UST Location:                                       | Phone Number: | Address:              |               |
|  |               | City (nearest):       | County:       |

| III. Tank Information   |   |   |
|---|---|---|
| Tank ID No. _____   | Tank Size: _____  | Install Date: _____   |
| Product formerly stored: _____  |   | New product stored (% ethanol/biodiesel content): _____             |
| Is tank lined: <input type="checkbox"/> Yes <input type="checkbox"/> No | <b>Note:</b> Tanks that have an interior lining are not approved for storage of ethanol or biodiesel blend fuels. The exception is FRP tanks that were lined under certification by the tank manufacturer to provide the compatibility. |   |
| UST Leak Detection:   | <input type="checkbox"/> Automatic Tank Gauge (ATG)   | <input type="checkbox"/> Inventory control & tank tightness testing |
|   | <input type="checkbox"/> Interstitial monitoring  | <input type="checkbox"/> Statistical Inventory Reconciliation (SIR) |

| Component   | Manufacturer | Model/Brand | UL                       |        | Manufacturer Approved *  | PE                       |          |
|---|--------------|-------------|--------------------------|--------|--------------------------|--------------------------|----------|
|   |              |             | Listed                   | Number |                          | Approved                 | Initials |
| Tank material                                     |              |             | <input type="checkbox"/> |        | <input type="checkbox"/> | <input type="checkbox"/> |          |
| Spill bucket **                                   |              |             | <input type="checkbox"/> |        | <input type="checkbox"/> | <input type="checkbox"/> |          |
| Overfill / Auto shut-off / Ball float (circle) ** |              |             | <input type="checkbox"/> |        | <input type="checkbox"/> | <input type="checkbox"/> |          |
| Submersible pump ***                              |              |             | <input type="checkbox"/> |        | <input type="checkbox"/> | <input type="checkbox"/> |          |
| Leak detection probes                             |              |             | <input type="checkbox"/> |        | <input type="checkbox"/> | <input type="checkbox"/> |          |
| Interstitial & sump sensors                       |              |             | <input type="checkbox"/> |        | <input type="checkbox"/> | <input type="checkbox"/> |          |

\* **Attach** documents from the manufacturer stating the approval and warranty (if one is provided) for use with specific alternative fuel.

\*\* **For retrofit UST systems only.** The applicant may request an extension of time to make this demonstration provided the following documentation is submitted with this application: (1) the reason for the extension request; (2) a plan and schedule for determining compatibility; (3) integrity test results for spill prevention equipment and (4) verification that the overfill control device is functioning in accordance with regulatory requirements. Extensions will not be granted beyond March 31, 2009.

\*\*\* **For retrofit UST systems only.** The applicant may request an extension of time provided the following documentation is submitted with this application: (1) the reason for the extension request and (2) a plan and schedule for determining compatibility. Extensions will not be granted beyond March 31, 2009.

**IV. Pipe Information**      Install Date: \_\_\_\_\_      Pipe: Pressurized  Suction

| Component   | Manufacturer | Model/Brand | UL                       |        | Manufacturer Approved *  | PE                       |          |
|---|--------------|-------------|--------------------------|--------|--------------------------|--------------------------|----------|
|   |              |             | Listed                   | Number |                          | Approved                 | Initials |
| <b>Configuration:</b> <input type="checkbox"/> Single wall <input type="checkbox"/> Double wall <b>Type:</b> <input type="checkbox"/> Steel <input type="checkbox"/> Fiberglass <input type="checkbox"/> Flexible <input type="checkbox"/> Other (specify): |              |             |                          |        |                          |                          |          |
| Pipe material   |              |             | <input type="checkbox"/> |        | <input type="checkbox"/> | <input type="checkbox"/> |          |
| Pipe dope/sealant / adhesive **   |              |             | <input type="checkbox"/> |        | <input type="checkbox"/> | <input type="checkbox"/> |          |
| Gaskets / Seals **  |              |             | <input type="checkbox"/> |        | <input type="checkbox"/> | <input type="checkbox"/> |          |
| Flex connector  |              |             | <input type="checkbox"/> |        | <input type="checkbox"/> | <input type="checkbox"/> |          |
| Angle check valve (suction pipe systems)  |              |             | <input type="checkbox"/> |        | <input type="checkbox"/> | <input type="checkbox"/> |          |
| Emergency shear valve   |              |             | <input type="checkbox"/> |        | <input type="checkbox"/> | <input type="checkbox"/> |          |
| Line leak detector  |              |             | <input type="checkbox"/> |        | <input type="checkbox"/> | <input type="checkbox"/> |          |

\* **Attach** documents from the manufacturer stating the approval and warranty (if one is provided) for use with specific alternative fuel.  
 \*\* **For retrofit UST systems only.** The applicant may request an extension of time provided the following documentation is submitted with this application: (1) the reason for the extension request and (2) a plan and schedule for determining compatibility. Extensions will not be granted beyond March 31, 2009.

**V. Petroleum Equipment Contractor Signature**

I certify by signing below that the components checked in the "UL" and/or "Manufacturer Approved" columns of sections III through IV are UL listed and/or manufacturer approved for use with ethanol blend fuels greater than 10% ethanol content or biodiesel blend fuels greater than 20% biodiesel content.

\_\_\_\_\_      \_\_\_\_\_  
 Signature of petroleum equipment contractor      Date

\_\_\_\_\_

Print petroleum equipment contractor name

Contractor Company Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Address \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

**VI. Professional Engineer Signature**

I certify by signing below that based on my knowledge and experience in material compatibility, the components checked and initialed in the "PE" column of sections III through IV are compatible for use with ethanol blend fuels greater than 10% ethanol content or biodiesel blend fuels greater than 20% biodiesel content.

\_\_\_\_\_      \_\_\_\_\_  
 Signature of professional engineer      Date

\_\_\_\_\_

Print professional engineer name

PE Company Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Address \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

PE license # & state: \_\_\_\_\_

Place PE seal in this space

**VII. Owner / Operator Signature**

By signing below you are acknowledging that all of the items in sections I through IV and V and/or VI have been completed.

\_\_\_\_\_      \_\_\_\_\_  
 Tank owner / operator signature      Date

\_\_\_\_\_      \_\_\_\_\_  
 Print tank owner / operator name      Company

Failure to submit this form with all sections completed and any appropriate attachments could result in an enforcement action and/or non-issuance of your operating permit.