

UST PIPING INSTALLATION CHECKLIST

(Part A)

Facility ID# : _____

Facility Name: _____

Physical Address: _____

Owner Of Tank(s): _____

Address: _____

Type of System (check one):

Suction _____ Pressurized _____

Gravity _____ Supply and Return _____

Type Of Primary Piping:

Steel _____ Fiberglass _____ Flexible _____ Other _____

Type Of Secondary Piping:

Steel _____ Fiberglass _____ Flexible _____ Other _____

Manufacturer: _____

Installation Company: _____
_____Company Address (Street/State/Zip):

Installation Foreman: _____

BEFORE COMPLETING THIS CHECKLIST, PLEASE READ CERTIFICATION ON PAGE 6.

Installation foreman must answer each question to verify the use of proper installation procedures. Please provide accurate figures and dimensions in the as-built map of the piping layout. **Questions marked with "[PHOTO]" must include photographs.** The photographs must be clear and in focus. Each picture will be numbered with the corresponding section of this checklist, and detailed descriptions are to be provided on the back of each picture. This checklist, **PART A**, and the **Testing Forms, PART B**, photographs, the as-built diagram, and a copy of the piping manufacturer's completed installation checklist are to be submitted within 15 days of completion of the piping installation to:

Hazardous Materials Program – Storage Tanks Section
Waste Management and Prevention Division
Vermont Department of Environmental Conservation
1 National Life Drive – Davis 1
Montpelier, VT 05620-3704

Note: Electronic submittals are encouraged; send installation checklists to: susan.thayer@vermont.gov.

As the installer, you are **required** to be certified by the piping manufacturer (listed on page 1). Have you been certified by the piping manufacturer to install their product? (check yes/no) **YES NO**

Certification#: _____ **Date:** ____/____/____

Note: Please provide a copy of certification with checklist.

Name of Certifier: _____

A. PRE-INSTALLATION CHECK

1. Have you reviewed the construction permit issued to the tank permittee? **YES NO**
2. Has the pipe trenching been planned to prevent piping runs across tanks whenever possible? **YES NO**
3. Have you notified the state UST Program for a final inspection? **YES NO**

B. BACKFILL

1. Please describe backfill used (i.e. particle size, type of material, etc.):

2. Is this backfill acceptable to the manufacturer? **YES NO**
 - a. Is backfill free of debris (rock, ice, snow, organic material, broken concrete, etc.)? **[PHOTO]** **YES NO**
 - b. Has a filter fabric been used to prevent backfill migration? **[PHOTO]** **YES NO**
 - c. How much backfill was used as the base for the piping trench? _____
3. Are there any piping crossovers? **[PHOTO]** **YES NO**

C. LAYOUT

1. Draw a diagram that shows the complete piping layout, including any product return piping, vent lines, and any unavoidable crossovers (note crossovers are highly discouraged). **Illustrate piping layout with photos as well.**

Are the diagram and necessary photographs attached? **[PHOTO]** **YES NO**

2. What is the minimum depth of burial for the entire piping run? (The depth measured from the top of the piping to the surface of the finished grade.) _____ **inches.**

Where does this point occur? _____

3. Have all sags and low spots in the piping run been corrected to ensure a uniform slope from the dispensers back to the tanks? **YES NO**

4. What is the slope in fractions of an inch per foot of piping run? _____" per foot

Note: Piping slope should have a minimum of 1/8" per foot.

5. Is there any section of piping that slopes away from the tank to a sump other than the tank-top sump? YES NO

If so, which section? _____

6. Are there any manifolded tanks? YES NO

a. If yes, which tank is the Prime tank? _____

b. Which tank(s) is the Secondary tank? _____

7. Remote fills are not allowed unless specifically stated in the permit. Are any remote fills installed? YES NO

a. If yes, which tanks? _____

b. Is the fill pipe secondarily contained? YES NO

D. SPILL CONTAINMENT AND OVERFILL PREVENTION.

1. Has a containment manhole or other method of spill containment been installed at each fill port? YES NO

a. Manufacturer and construction: _____

b. Size: _____ gallons.

Note: Minimum size allowed is 15 gallons unless variance is granted by UST Section

c. Is there a drain valve in any of the containment devices? YES NO

Note: Drain valves are not allowed.

2. Is fill port spill containment double walled? YES NO

Comments: _____

3. Select which overfill protection device is used and answer the questions that apply to that device:

___ **Automatic Shutoff Device** (not suitable for loose fill or pressurized delivery)

-Is the device installed at a distance no more than 95% of tank capacity? YES NO

Electronic Overfill Alarms (This method is the only overfill protection device that is effective for loose fill or pressurized deliveries.)

- Is it on an electrical circuit that is active all the time? **YES NO**
- Is there an audible and visible alarm such that the delivery driver can hear it and see it? **YES NO**
- Is it set to activate at not more than 90% capacity of tank? **YES NO**

Vent Whistle (Allowed only on tanks receiving fuel deliveries by peddle truck)

- What distance is the vent pipe from the fill port? _____ **feet.**
- Is the whistle set to stop at not more than 90% capacity of tank? **YES NO**
- Is the whistle audible during deliveries? **YES NO**

Manual overfill prevention (Only for tanks never receiving more than 25 gallons at one time)

- 4. Has a drop tube been installed in each fill pipe (only if overfill is not automatic shutoff device)? **YES NO**

E. RELEASE DETECTION METHODS FOR PIPING & DISPENSERS

1. Indicate how many of each type of containment sump is installed:

- _____ Tank-top STP (required for all STPs)
- _____ Tank-top piping sump (non-pressurized)
- _____ Tank-top manifold sump on secondary tank (required for all manifold piping)
- _____ Dispenser (required for all new installations, including exempt suction)
- _____ Other (i.e., intermediate sump at pipe transition)

Explain: _____

- 2. Are any of the containment sumps double walled? **YES NO**

3. If so, indicate which sumps and how many

- _____ Tank-top STP (required for all STPs)
- _____ Tank-top piping sump (non-pressurized)
- _____ Tank-top manifold sump on secondary tank (required for all manifold piping)
- _____ Dispenser (required for ALL NEW installations, including Exempt Suction)
- _____ Other (i.e., intermediate sump at pipe transition)

- 4. Are all tank-top fittings (fill pipes, other risers) connected to the tank with vapor-proof fittings and equipped with vapor-proof caps? **YES NO**

5. What type of leak detection will be used to monitor the piping?

- Manual interstitial monitoring
- Electronic interstitial monitoring
- Exempt suction system with dispenser sump that is monitored
- Electronic** **Manual/Visual**

Note: Exempt suction systems require dispenser sumps and leak detection monitoring

- a. If electronic, is every sump (including dispenser sumps) equipped with a sensor? **YES** **NO**
- b. If sumps are equipped with sensors, can positive shutdown be initiated? **YES** **NO**
- c. If electronic, are the sensors installed properly (at lowest point where liquid will accumulate first)? **YES** **NO**

Make/Model of electronic monitoring system: _____

- d. If exempt suction, is a vertical check valve installed at the dispenser end of the piping run? **YES** **NO**

6. Is each pressurized line equipped with a line leak detector? **YES** **NO**

7. What type of line leak detectors (LLDs) are installed?

- Electronic** **Mechanical**

8. **LLD Manufacturer/Model:** _____

Shear Valves (For Pressurized Piping Only)

- 9. Is a shear valve installed on each pressurized line? **YES** **NO**
- 10. Is each shear valve anchored to the dispensing island? **YES** **NO**
- 11. Is each shear valve installed anchored at the proper height in relation to the base or the dispensing island grade? **YES** **NO**
- 12. Does each shear valve close when the mechanism deployed/tested? **YES** **NO**

F. CORROSION PROTECTION

Note: Steel piping must have cathodic protection. Piping constructed of corrosion-resistant materials does not require cathodic protection.

1. Is cathodic protection required for the piping? **YES** **NO**

- a. If yes, what method of cathodic protection is installed? _____
- b. If factory-installed tank anode is also being used to protect piping, is it sufficient? YES NO
- 2. Is all metal/corrodible ancillary equipment, including flex connectors and risers, isolated from contact with soil or cathodically protected? YES NO

G. AS-BUILT OF PIPING INSTALLATION SHOWING PIPING RUNS TO DISPENSERS

1. Accurate as-built drawings with scale and dimensions must be included in the Piping Checklist submittal. Failure to include as-built will result in a returned checklist.

Has the drawing been attached to this checklist? YES NO

ADDITIONAL COMMENTS: _____

CERTIFICATION

I certify under penalty of law that this document, photographs, and any other attachments were prepared under my direction or supervision. The information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and/or imprisonment for knowing violations. I am aware that release detection must be conducted and documented at least weekly, and that all release detection documentation must be kept for 3 years.

_____/_____/_____
****Required**** Signature of tank owner or authorized agent Date

_____/_____/_____
****Required**** Signature of authorized agent for contractor Date