Raising Expectations

For UST Installations

Chuck Corliss, P.E.
What is your UST Program’s Expectations?

“Expectations” = Quality ??

Can regulations/codes alone produce Quality during planning & construction of UST facilities?

NHDES - 2018 National Tanks Conference
If Expectations = Quality

How do we raise the level of expectations?
And more important “Common Expectations”

Project Involvement!

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NH’s Four Phases of Project Involvement

- Phase 1: Education and Outreach
- Phase 2: Project Application & Plan Submittal for Review & Approval
- Phase 3: Pre-backfill Inspection
- Phase 4: Final Inspection

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Phase 1:
Education and Outreach
Day to Day Correspondence

With Owners, Engineers & Contractors etc..

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Informational Guidance

“Sample Plans”

(None yet for UST, but in the works)
Informational Meetings

UST Contractors & Engineers Day

First One Scheduled for February 6, 2019
Phase 2:

Project Application & Plan
Submittal for Review & Approval
Utilizing Adopted NHDES, NFPA, PEI, API, UL & NLPA Regulations/Codes
Project Application

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Detailed Project Plans
Detailed Project Plans
Fuel System Components

Offsets! Wells - Brooks - Buildings - Doorways

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Construction Approval Letter
Phase 3:
Pre-Backfill Inspection
Dear Chuck,

Note that the contractor is requesting an inspection of the gas system (Tank 1) at this time and will schedule another inspection for the diesel system soon. The changes noted are only for the gas system.

As required by Env-Or 407.67, I hereby certify that I have inspected the above-referenced facility and that the construction has been performed in accordance with the approved plans and specifications except for the following revisions of which I approve:

1. Positional changes of tank, equipment and piping.
2. The stairway and balance Tank 1 and the road has been eliminated. After discussions with the DOT staff, the stair will be preserved so the blocks can be eliminated.
3. The vent pipe for Tank 1 from the new riser is connected to a 3’ riser. This 3’ line is connected to a 3’ vent stack with an OPW 623V-2220 pressure vent cap.
4. By manifolding the vent lines, a vapor port and vapor spill container have been eliminated.
5. The dispenser sumps changed to model RCD7760.
6. The PC3 tank sumps have been eliminated. All tank sumps are Env-Or CMP42 but the multi-port package has been added only when spilt containers are required. Otherwise a normal sump cover will be used.
7. The vent piping entry has changed to a model FEB-175-SC.
8. The overflow prevention valve has been changed to an EBW 798-592-902. Note that the problems noted in previous emails have been resolved by EBW. Also note that I have shown the overflow depth dimension and noted that the 9” solves the previous issue.

Charles Corliss, P.E.
Oil Compliance and Initial Response Section
6 Market Drive, P.O. Box 95
Concord, NH 03301-0095

Subject: Warren, APPL/EINOCKS STORE, 23X ROUTE 28

U.S. Facility ID: 40176239

December 4, 2017
Contractor Requirements

New Hampshire Requires an ICC Certified UST Installer “U1”

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Site Inspection
Does the Overall Layout Match the Plans?
Do the Components Match the Plans?

Manufacture – Model

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Tightness Testing:
Results of Sump and Piping System

- Sumps = 1” from the top for 3 hrs
Bring a 4 ft Level!

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Vent Pipe Slope

1/8” per ft
Sloping Back to the Tank

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Product Pipe Slope

1/8” per ft
Sloping Back to the Tank
Corrosion Protection of Riser Pipes
Sump and Pipe Inspection

- Burial Depth
- Pipe Spacing
- Bedding Material
Correct Installation of Product Pipe

Contractor Failed to Remove Scuff Guard

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Entry Boots Installed Correctly?

➢ No Sealants Allowed! Compatibility Concerns
Shear Valve Placement

Flush with Shear Plane!

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ICC Contractors Tightness Testing Report

- Dated
- Duration/Time
- Pressure/psi
- Signed

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Phase 4: Final Inspection
Automatic Tank Gauge (ATG)

- Physically Verify for 90% Alarm Activation
- Visual & 10 Second Audible Alarm

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Drop Tube Valves

- Physically Verify 95% Setting
- Emco & OPW Valves
Vent Stacks

- Heights?
- Secured?
- Wires?
- Corrosion?
- Protection?
Concrete Dispensing Pad

- Positive Limiting Barriers (PLBs)
Dispensing within Dispensing Pad

➢ Check Nozzle Reach!
Dispensing Pad Joints

➤ Seal the Joints!
Why Seal the Joints?
Sump Components

Pull Back Tightness Testing Boots

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System Leak Detection

Check all Sensors!

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Emergency Stops and Signage
Safety Items

- Break-Away
- Fire Extinguisher
- Signage

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Informational Postings

- Spill Response
- Tank Chart
- Class C Operators
Obtain Owners Signoff

and Installers or N.H. P.E.’s Signoff
As-Built Plans

Signed & Dated!
In Summary
Start to End Project Involvement

= Expectations

= Quality
Avoid.....

Costly Field Changes...$$$$$$$

And Having Chronic Compliance Issues Following Operational Approval
Contact Information

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