



17 October 2014

Mrs. Denise Leamy
2346 Vermont Route 101
North Troy, VT

RE: AST Spill Response – WMD 478

Dear Mrs. Leamy:

On 25 September 2014, ACCUWORX USA, Inc. (ACCUWORX) was notified by Mr. Dennis Percy of Fred's Plumbing and Heating to the presence of a fuel oil release at your residence located at 2346 Vermont Route 101 in North Troy, Vermont (**Figure 1**). The release is believed to have resulted from a slow leak within the uncoated copper supply line connected to your 275-gallon above ground storage tank (AST) that ran along the basement concrete floor.. The failed line had been replaced by a plastic coated copper line prior to ACCUWORXs arrival onsite.

Apparent Mechanism of Release:

The exact amount of fuel oil released to the environment is unknown; however, it is believed to be more than 40 gallons of fuel oil based upon the tank volume from the last fuel delivery; however, approximately 50 gallons of oil was removed from the septic tank, which may indicate that the release occurred for a longer duration. The fuel oil released from the copper line appears to have flowed along the concrete floor in close proximity to the basement foundation to the water sump collection system located approximately two feet from the apparent line break. The sump was equipped with a pump that removes groundwater from the basement foundation system and discharges into the onsite septic tank located in the rear of the residence. ACCUWORX provided emergency spill response on 25 September 2014, per verbal approval of Mr. Matt Moran of the Vermont Department of Environmental Conservation (VT DEC). Photographs of release area and site activities are included.

Site Information:

The Leamy Residence is located at 2346 Vermont Route 101 in North Troy, Vermont, which is set in a rural/residential neighborhood. The coordinates at the site are: 44°55'53.23"N, latitude and 72°24'35.47"W, longitude. The property is occupied by a single family residential home with a finished basement. The property contains one 275-gallon fuel oil AST located in the utility room of the basement in close proximity to the sump pump, and is utilized for heating purposes. The tank was found to be in good condition upon initial inspection, with no rust or pitting observed.

The site and surrounding properties are supplied by private drilled wells. The on-site supply well is located approximately 45 feet west of the release area. Upon inspection of the well casing, no well tag or information was obtained on the wells construction or depth, but it is believed to be a drilled bedrock well based upon the casing. The onsite septic tank, where the sump pump discharges to, and associated mound leach field are located approximately 40 feet and 100 feet west from the release area, respectively.

ACCUWORX USA, Inc.

P.O. Box 7240, Barre, VT 05641

(802) 522-1306 TOLL FREE 1-888-231-9396 FAX (802) 522-1059

www.accuworx.com

Environmental Observations:

Visible free-phase fuel oil was observed within the sump basin; the sump pump was unplugged by Fred's Plumbing and Heating during their visit to reduce the amount of oil into the septic tank. Fuel was also observed along the floor from the replaced copper line to the sump. Free-phase fuel oil was removed and the impacted concrete floor was cleaned with a mild surfactant. Following cleaning the area was allowed to dry and a two-part epoxy sealant was applied to the affected area. Free-phase fuel oil was removed from the sump basin using a vacuum. Additional free-phase fuel oil was found to be entering the sump from the basement drainage pipes once the water level within the basin was depressed, so oil adsorbent booms were placed in the basin to passively collect residual fuel oil and the system is being periodically monitored.

Indoor Air

Strong petroleum odors were noted within the basement and slight odors were noted on the first floor. Photo-ionization detector (PID) readings of indoor air within the basement ranged from 5.0 to 15 ppmv and 0.2 to 2.4 ppmv on the first floor. Due to petroleum concentrations and sensitivity by the homeowner to fuel oil, approval for a vapor-phase carbon unit was granted by the VT DEC, and installed within the basement of the residence to treat the impacted air following the removal of free-phase fuel oil. Following the installation of the vapor phase unit, indoor air has been 0.0 ppmv and the homeowner's have not observed fuel oil related odors.

Septic Tank and Wastewater System

On 1 October 2014, the onsite septic tank was located and free-phase fuel oil was observed floating within the tank. The tank has not been pumped for quite some time, and found to be very full of solids. Fuel oil was also observed within the effluent pipe that leads to the mound style leach field, which is gravity fed to the downgradient of the septic tank. On 2 October 2014, ACCUWORX removed free-phase fuel oil from the septic tank using our vacuum truck. During the skimming of the fuel oil, it was found that the fuel oil was incorporated within the solids of the tank, so oil adsorbent booms were placed in the septic tank to recover oil that could not be skimmed. Upon speaking with local septic companies, they were unwilling to pump the solids within the tank as it will create an issue with their offloads at the Wastewater Treatment Facilities, and they recommend pumping the entire contents of the tank.

Conclusions and Recommendations:

Based upon site observations, ACCUWORX recommends the following additional work:

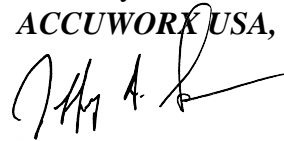
1. The oil adsorbent booms within the septic tank and sump system should be periodically inspected.
2. The contents of the septic tank should be pumped and disposed of as hazardous waste, due to the unwillingness of the traditional wastewater treatment facility to accept the material.

3. The mound system should be evaluated for fuel oil contamination through the use of borings.
4. A water supply sample should be collected from the on-site drilled well for the possible presence of volatile organic compounds in accordance with EPA Method 524.2.

Based on the findings of the recommended work a summary report should be completed and the need for additional work evaluated.

Please call me if you have any questions or concerns regarding the enclosed information.

Sincerely,
ACCUWORK USA, Inc.



Jeffrey A. Simone
Environmental Senior Scientist

Attachments

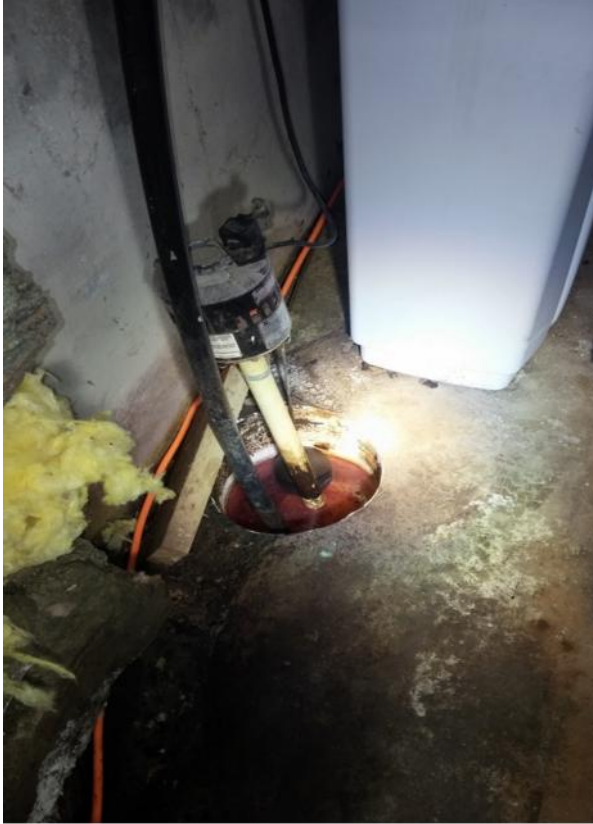
cc. Mr. Matt Moran – VT DEC

Figure 1



**WMD 478
Leamy AST Release
2346 Vermont Route 101
North Troy, Vermont**

Leamy Residence Fuel Oil AST Release



Photograph #1-Site Overview – Fuel Oil in Sump.



Photograph #2-Site Overview – Oil Adsorbent Pads Following Pump out (next day)



Photograph #3-Site Overview – Spill Area from Soft Copper Line.

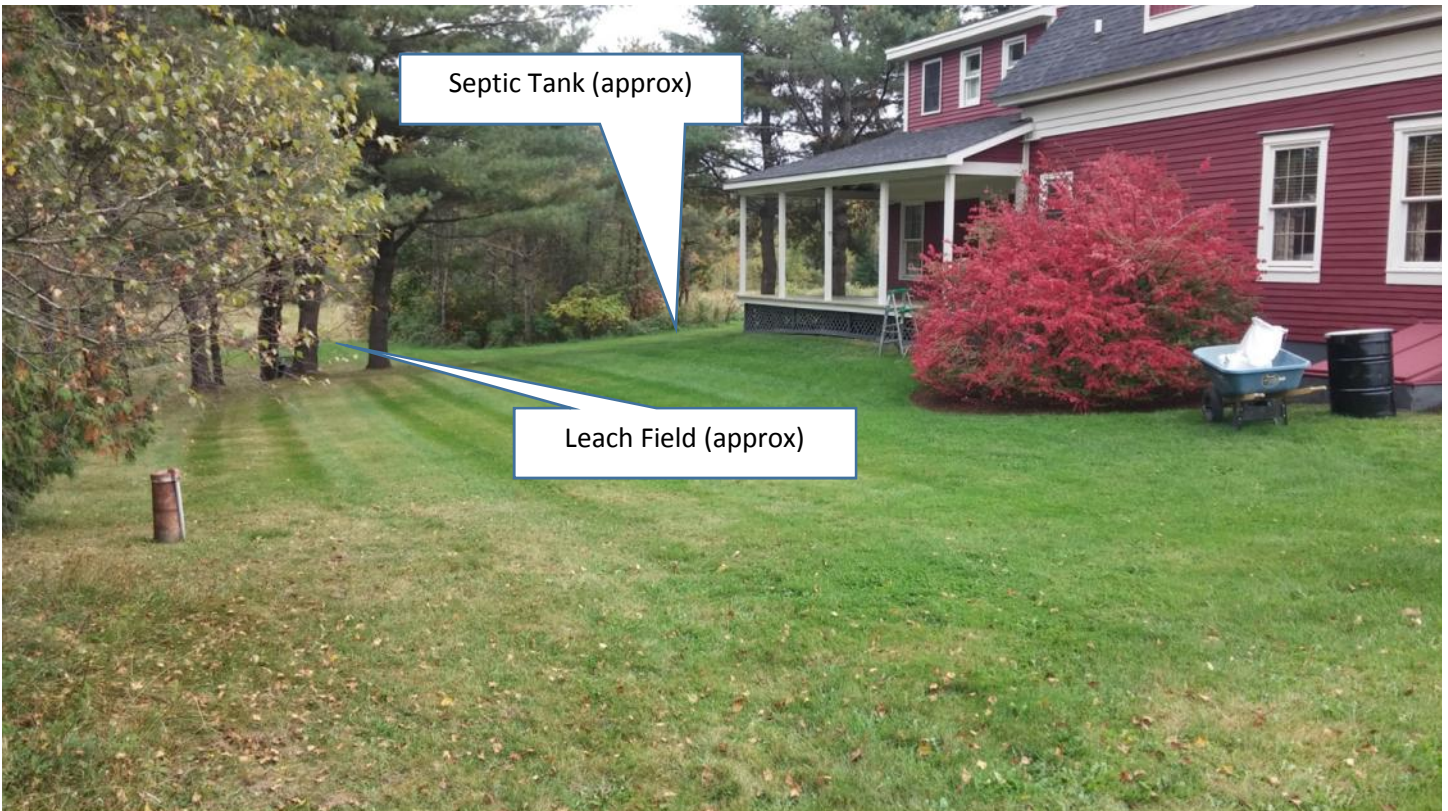


Photograph #4-Fuel Oil within Septic Tank.

Leamy Residence Fuel Oil AST Release



Photograph #5 - Well Head in Foreground - View toward South



Septic Tank (approx)

Leach Field (approx)

Photograph #6 - Site Overview - View toward West