

## CONCLUSIONS / RECOMMENDATIONS

The 2021 (VDEC) Randolph Center, VT - LDS Project included (2) days of contracted leak detection services within the distribution system. The survey provided coverage on the entirety of the town as well as VTC owned assets due to the shared system between both entities.

Throughout the survey, a total of 3.80 miles of distribution line was inspected including all hydrants, as well as located valves and curbstops. For the VTC Campus Property, a valve and hydrant sweep was conducted due to the high-pressure metallic lines and main feeds into the buildings. All located curbstops outside of the Campus in both VTC & Randolph properties were inspected.

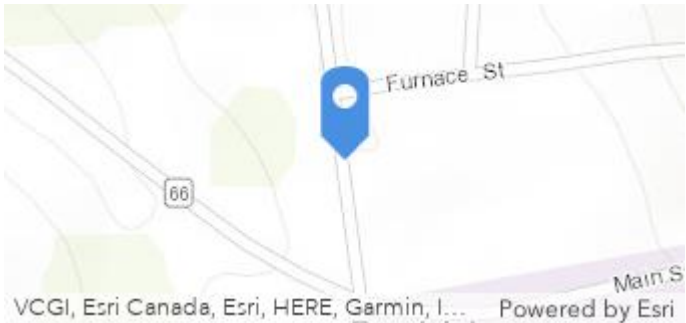



In all areas throughout the shared system that was determined to be of plastic make-up, an attempt was made to reduce the pressure on the lines and increase the decibels to determine if an issue was present. This was performed by cinching or throttling the valves in areas that were applicable. All locations in which curbstops/valves could not be exercised, a notation was made by Randolph personnel to be addressed at a later date.

The final results provided confirmation of (1) minor Distribution Leak. Additionally, there was (1) System Note and (3) Customer Leaks identified that are potentially contributing to NRW loss. Total loss from this field is estimated to be within the (1.0) gpm range collectively. *\*Estimated loss figures from System Note and Customer leakage were not included in the Leak Report loss totals.*

Please see below for any additional Project specifics and preventative WLR recommendations:

- ❖ (2) minor leaks were discovered on the VTC farm property, they were located beyond the 2" master meter feeding into the property. However, due to the age of the current meter, it could not be determined if the meter is capturing any low-flow waste. While the meter appears to be registering high-flow to a degree, it is recommended that the meter be tested and/or replaced due to potential inaccuracies that are common with out-dated positive displacement meters. Residential meters within the system that have not been replaced recently should also be considered for upgrades.
- ❖ For all curbstops that were not able to be exercised during the inspection, it is recommended that once these accounts are addressed, that the curbstops be re-inspected acoustically when the valve is cinched to determine if there any issues present on the line. This is particularly advised for longer stretches of service line that are determined to be of plastic make-up.
- ❖ GIS mapping of all distribution assets is also recommended for the Town of Randolph Center. While assets generally tend to get buried over time, having an accurate GIS foundation will help expedite all future water infrastructure work including emergency situations. Outside contract work and new personnel hires will also benefit from having first-hand knowledge of asset locations.

### Leak Card 1

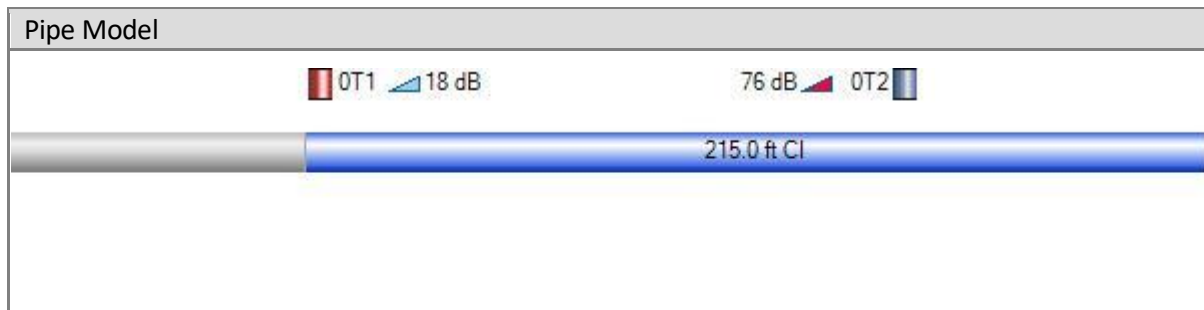
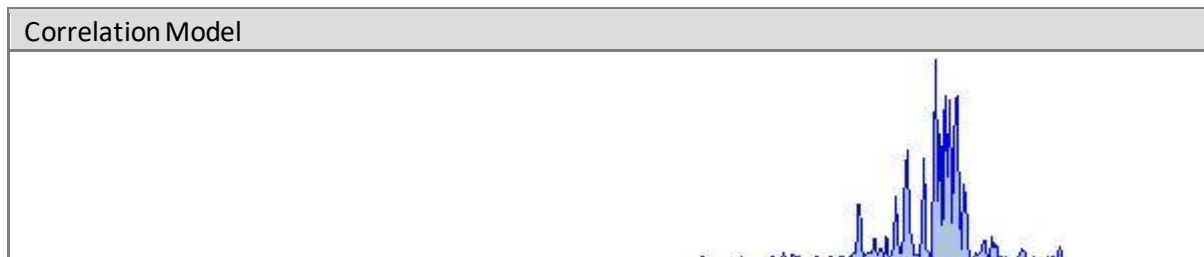
<b>Project:</b>	Randolph Center, VT - VDEC 2021 Leak Detection Investigation				<b>Address:</b>	2975 Ridge Rd			
<b>Urgency:</b>	Minimal	<b>Surface Material:</b>	Grass	<b>Leak Type:</b>	Fitting	<b>Pipe Size:</b>	6	<b>Pipe Material:</b>	DI
<b>Leak Detection Method:</b>	Sounding Visible Observation		<b>Visible Water:</b>	No	<b>DB level:</b>	62	<b>Person Submitted To:</b>	Mr. John Lens	
<b>MPT Estimated GPM</b>	<b>Gallons Per Minute:</b>		0.1		<b>Vicinity Map</b> -72.60725 43.94173 Leak 				
	<b>Gallons Per Day:</b>		144						
	<b>Gallons Per Month:</b>		4,380						
	<b>Gallons Per Year:</b>		52,560						
<b>Leak Description &amp; Comments:</b>									
Fitting leak detected via sounding equipment. Further probing inspection found water signatures inside the valve casing. Leak appears to be at or near the valve assembly.									
									
									
<b>Project Manager:</b>	Isaiah Jaeger				<b>Date:</b>	June 25, 2021			

# Enigma Test Report



Test Details	Test Date	Report Date	Site
	6/25/2021	6/29/2021	VDEC 2021 / VTC FARM / 062521

Loggers	ID	Location
	OT1	Hydrant valve for 6" line on Water St
	OT2	Meter pit located at VTC Cattle Barn



Pipes	Length (ft)	Material	Diameter (in)	Velocity (ft/s)
	215.00	Cast Iron	6.00	4002.62

Leaks	Time Delay (ms)	From Red	From Blue

Filters	Filter	Low	High
	Filter1	75.0	2000.0