

Fuel Oil Storage Tank Maintenance, by Carla L. Romita **The Mann Report, August 2006**

Earlier articles in this space have covered boiler and burner maintenance. Oil tank maintenance is an equally essential component of a comprehensive building maintenance program.

New York City requires that all fuel oil storage tanks be registered and permitted, regardless of their size or the grade of fuel oil that they may contain. In order to register, the building owner or manager must file an application with the New York City Department of Buildings for a Certificate of Approval through a licensed oil burner installer and Professional Engineer/Architect. Once the Department of Buildings approves the paperwork, it forwards the documents to the New York City Fire Department which conducts its own review. The Fire Department may then issue an oil tank permit to the building and collect a registration fee. The building owner is required to renew the permit and pay a registration fee to the Fire Department each year. For No. 6 oil, the building superintendent must have a Certificate of Fitness, the license required to maintain no. 6 oil burning equipment issued by the New York City Fire Department.

In addition to New York City's registration requirements, New York State requires that all fuel storage tanks, regardless of their location above ground or underground, with a storage capacity of greater than 1,100 gallons be registered with the New York State Department of Environmental Conservation (DEC). The State also requires that a tank tightness test be conducted for all underground storage tanks that store no. 2 fuel oil or no. 4 fuel oil. The tightness test must be conducted by a licensed tank testing contractor at least once every five years and the results reported to the DEC. (Some New York State counties have more stringent tank regulations and require more frequent testing, but New York City follows the requirements of the State.) The tightness test must be capable of detecting a tank or piping leak as small as five hundredths of a gallon in one hour.

If a tank fails a tightness test, the DEC will issue a spill number (whether or not any product has actually been spilled) and your fuel oil dealer will not be permitted to deliver into the failed tank until it has been repaired or replaced by a licensed contractor and the DEC closes the spill number.

Tanks servicing heating systems that burn no. 6 oil are not currently subject to the State tank tightness testing requirements. Building owners/managers are, nonetheless, required to register such tanks with the State every five years.

Regardless of government regulations, it is a good practice to implement a consistent procedure for ensuring that oil tank product levels are carefully measured and recorded. If your building's fuel consumption sharply increases, or if you seem to need frequent deliveries during the off-season months, have your service technician check the tank system. If the technician cannot find the problem, a tank test by a licensed tank testing contractor may be indicated.

Good tank maintenance begins at the fill line. Each time a delivery is made to a location, the superintendent must check that the fill cap is securely tightened after the delivery is completed. Failure to do so may allow melting snow and water to seep into the system. The water promotes condensation and the growth of microorganisms that can degrade the fuel and accelerate the accumulation of sludge in the tank. Sludge can enter the piping, filters, pumps, and nozzles and cause oil burner breakdowns. Keeping your oil tank filled during the off-season months will help to reduce condensation.

Your building's superintendent should also inspect the visible fittings, valves, filters, tank gauges, and piping for leaks. These can be replaced easily and are relatively inexpensive. Above ground tanks should be monitored for indications of cracking, wear, corrosion, excessive settlement of structures, and any other signs that the integrity of the fuel tank may be compromised. Basement areas that contain above ground or partially above ground tanks should be kept clean and free of debris. Any leaky pipes in the area should be repaired and the tanks themselves should be painted periodically to prevent corrosion from the outside in.

Periodic tank cleanings are also recommended. Tanks that store no. 2 heating oil should be cleaned approximately once every five years. Tanks that store no. 4 or no. 6 fuel oil should be cleaned about once every three years. In order to perform the cleaning, a licensed tank cleaning contractor will open the tank and squeegee the interior until it is clean. Once the cleaning is completed the tank will be resealed.

With proper maintenance, fuel oil tanks can remain safely in service for several decades.