

TABLE 15

## MTBE OCCURRENCE IN GROUND WATER NEAR UST RELEASES

SOURCE	NUMBER OF WELLS	HIGHEST MTBE RECORDED (ug/L)	RANGE OF MTBE RECORDED (ug/L)	HIGHEST MTBE WITH NO BTEX PRESENT (ug/L)	REFERENCE
DAVIDSON	300	200,000	10 - 200,000	879	AUTHOR
GARRETT ET AL.	8	236,250	15- 236,250	690	2
MALLEY ET AL.	10	987	11- 987	NA	55
LUMRS & PYOTT	35	26,000	7 - 26,000	180	54

## Fuel Leak Trends

Prior to the mid-1980s, only a few state and local agencies had laws governing the operation and testing of USTs. As a result, leaking UST systems could release fuel undetected and unabated for extended periods of time. Repair and replacement of USTs were sometimes based on economics alone (i.e. cost of repairs vs. cost of lost fuel). In 1986 the USEPA estimated that approximately 20% of the 1,800,000 registered petroleum USTs were probably leaking and this estimate has held accurate (56).

On December 22, 1988 the UST regulations entitled "Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks" became enforceable. These regulations established performance standards for new USTs and required leak detection, leak prevention, and corrective actions for leaks or spills (57). Reporting such leaks to appropriate agencies was also required. These federal laws were adapted by most states, and as a result:

- prevention measures are taken to avert and reduce leaks
- regular activities (tank gauging, tightness tests, etc.) are used to detect leaks sooner
- releases must be quickly reported and acted upon
- release impacts must be assessed
- where necessary, releases must be remediated

All these have combined to decrease the number of tanks in existence and to reduce the duration and sizes of leaks since the early 1980s. This has greatly reduced the amount of fuel released into the environment. As the final phases of the UST regulations become effective by December 1998, even more improvements should take place and reduce the total volume of fuel released even further.