

### 3. Stage 1 DBPR Maximum Residence Time Location May Not Reflect the Highest DBP Occurrence Levels

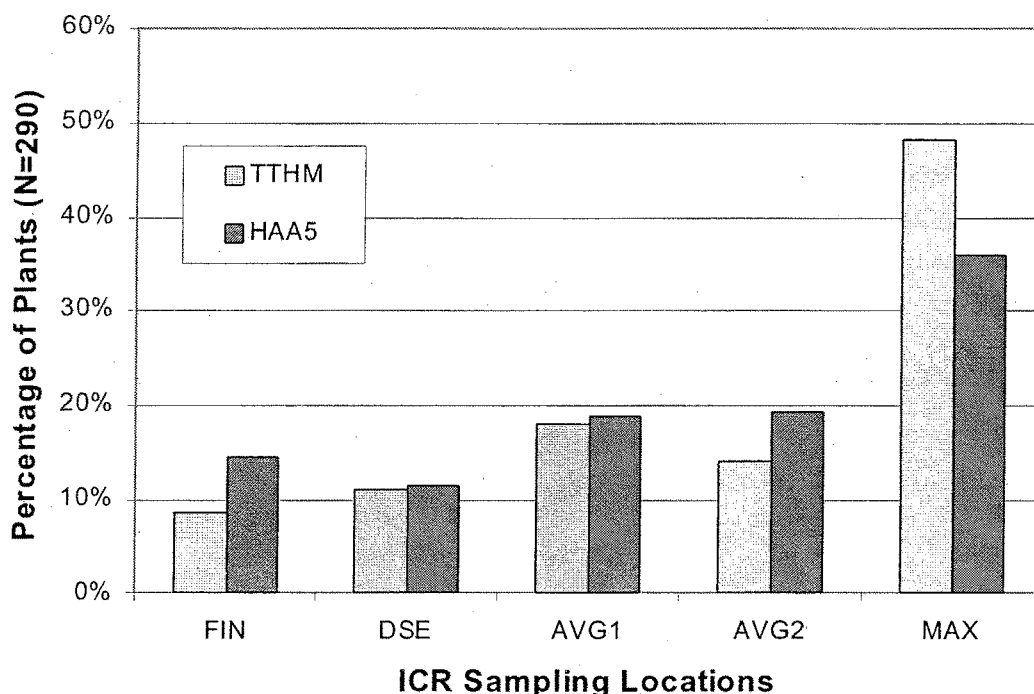
The 1979 TTHM rule and Stage 1 DBPR monitoring locations must include a site reflection maximum residence time in the distribution system with the intent of capturing the highest DBP levels in the distribution system. The Information Collection rule referred to this specific location as MAX. The Information Collection rule data indicate two important results: (1) that monitoring locations identified as the maximum residence time locations often did not represent those locations with the highest DBP levels and (2) the

highest TTHM and HAA5 level often occurred at different points in the distribution system.

Figure IV-5 illustrates that the highest TTHM and HAA5 LRAAs could be at any of the four Information Collection Rule sample locations in the distribution system or, in some cases, at the finished water location. Fifty percent of the plants evaluated have the highest TTHM LRAA concentration occurring at a site other than the maximum residence time monitoring site. over 60% of plants evaluated had the highest HAA5 LRAA at a location other than the maximum residence time monitoring site.

Figure IV-6, based on data from the National Rural Water Survey (NRWS), indicates that systems serving fewer than 10,000 people also frequently have their highest TTHM and HAAS levels at locations other than those intended to represent maximum residence time. The occurrence patterns indicated in Figures IV-5 and IV-6 may be due to several factors, such as HHA5 degrading over time in the distribution system, maximum residence time monitoring sites not actually representing the maximum residence time, or that using a simple estimation of maximum residence time cannot characterize a complex distribution system.

**Figure IV-5. Frequency at Which Highest TTHM or HAA5 Locational Annual Average Concentrations Occurred at Each Information Collection Rule Sampling Location for plants meeting Stage 1 MCLs<sup>1</sup>**



<sup>1</sup> Includes only the Information Collection Rule plants with at least 3 quarters of data and with each quarter having at least 3 sampling locations for both TTHM and HAA5 during the last 4 quarters of the Information Collection Rule sampling period.