

For matrix spike and surrogate spike recoveries, independent warning limits were established for volatiles, semivolatiles and pesticides. These limits meet the PSEP definition of warning limits and screen data effectively relative to the EPA CLP control limits. The chemical-specific EPA CLP control limits were adopted for use as action limits for surrogate spike recoveries and for a basis of evaluation in the application of best professional judgment for matrix spike recoveries. Where certified reference materials (CRMs) are available, the interlaboratory-derived 95% confidence interval (CI) should be used as an objective evaluation tool. This alternative is endorsed by PSEP.

Table 8-6. DMMP Warning and Action Limits

QA Element	Warning Limits	Action Limits
Precision		
Conventionals:	None	20% coefficient of variation (CV)
Metals:	none	20% relative percent difference (RPD) or CV
Organics:	35% RPD or COV	50% CV or a factor of 2 for duplicates
Accuracy: Matrix Spikes		
Metals:	none	75-125% recovery
Organics:		none (zero percent recovery may be cause for data rejection however) ¹
Volatiles:	70-150% recovery	
Semivolatiles and Pesticides:	50-150% recovery	
Reference Materials		
Metals:	none	95% CI if specified for a particular CRM; 80-120% recovery if not.
Semivolatiles/Pesticides:	none	95% CI for CRMs. No action limit for uncertified RMs.
PCBs	PS-SRM: for Aroclor 1260 - Warning low: 41 ug/kg - Warning high: 180 ug/kg	None at this time
Surrogate Spikes		
Organics:		EPA CLP chemical-specific recovery limits
Volatiles:	85% minimum recovery	
Pesticides:	60% minimum recovery	
Semi-volatiles:	50% minimum recovery	

¹Rigorous control limits are not recommended due to possible matrix effects and interferences.