APPENDIX VII
SUMMARY OF COMMON LABORATORY CONTAMINANTS, CONCENTRATION REQUIREMENTS, AND RISK ASSESSMENT IMPLICATIONS

Appendix VII lists common organic laboratory contaminants that may appear in blanks. The purpose of this appendix is to inform the reader of chemicals that may appear in analyses but may not be present at the site. Analytes with values above instrument detection limits are reported by laboratories. Some sample concentrations may not be reported through the review process, as explained below, but if they are reported, possibilities of false positives exist. The implications for risk assessment are included.

Common Laboratory Contaminants	Concentration Requirements	Risk Assessment Implications
Target Compound		
Methylene Chloride	Sample concentrations less than 10x that detected in method blanks will be reported as undetected (or flagged B).	o Include analyte if concentration is greater than 10x blank. o Include analyte if concentration is less than 10x greater than blank concentration and multiple chlorinated volatile analytes are detected. Exclude analyte in all other situations.
Acetone	Sample concentrations less than 10x that detected in method blanks will be reported as undetected (or flagged B).	o Include analyte if concentration is greater than 10x blank. o Include analyte if concentration is less than 10x greater than blank concentration and multiple ketones are detected. o Exclude analyte in all other situations.
Toluene	Sample concentrations less than 10x that detected in method blanks will be reported as undetected (or flagged B).	o Include analyte if concentration is greater than 10x blank. o Include analyte if concentration is less than 10x blank concentration and multiple aromatic or fuel hydrocarbons are detected. o Exclude analyte in all other situations.

Common Laboratory Contaminants	Concentration Requirements	Risk Assessment Implications
2-Butanone (methyl ethylketone)	Sample concentrations less than 10x that detected in method blanks will be reported as undetected (or flagged B).	o Include analyte if concentration is greater than 10x blank. o Include analyte if concentration is less than 10x blank concentration and multiple ketones are detected.
Phthalates (i.e., dimethyl phthalate, diethyl phthalate, di-n-butyl phthalate, butylbenzyl phthalate, bis(2-ethylhexyl) phthalate, di-n-octyl phthalate)	Sample concentrations less than 10x that detected in method blanks will be reported as undetected (or flagged B).	o Include analyte if concentration is greater than 10x blank. o Exclude analyte in all other situations.
Tentatively Identified Compounds		
Carbon dioxide	Not reported if present in the method blank.	o Exclude analyte in all situations.
Diethyl ether	Not reported if present in the method blank.	o Include analyte if concentration is greater than 10x blank. o Exclude analyte in all other situations.
Hexanes	Not reported if present in the method blank.	o Exclude if analyte concentration is not 10x method blank. o Exclude if analyte concentration is not 10x field blank (EPA definition). o Exclude if sample is not analyzed within seven days.

Common Laboratory Contaminants	Concentration Requirements	Risk Assessment Implications
Freons (e.g., 1,1,2-trichloro-1,2,2-trifluoroethane, fluorotrichloromethane)	Not reported if present in the method blank.	o Exclude if analyte concentration is not 10x method blank. o Exclude if analyte concentration is not 10x field blank (EPA definition). o Exclude if sample is not analyzed within seven days.
Solvent preservative artifacts (e.g., cyclohexanone, cyclohexenone, cyclohexanol, cyclohexenol, chlorocyclohexene, chlorocyclohexanol)	Not reported if present in the method blank.	o Exclude if artifact concentration is not 10x method blank. o Exclude if artifact concentration is not 10x field blank (EPA definition). o Exclude if sample is not analyzed within seven days.
Aldol reaction products of acetone (e.g., 4-hydroxy-4-methyl-2-pentanone, 4-methyl-penten-2-one, 5,5-dimethyl-2(5H)-furanone)	Not reported if present in the method blank.	o Include analyte if concentration is greater than 10x blank. o Include analyte if concentration is less than 10x greater than blank concentration and multiple ketones are detected. o Exclude analyte in all other situations.