



Minnesota Pollution Control Agency

520 Lafayette Road North
St. Paul, MN 55155-4194

Laboratory Data Review Checklist

Doc Type: Data Review

Instructions: The following is the Minnesota Pollution Control Agency's (MPCA) informal checklist that may be used to review data. The information follows the general format of the National Functional Guidelines which is the primary data review tool used in the U.S. Environmental Protection Agency's Contract Laboratory Program for Superfund analytical work. This checklist should be used in conjunction with the *Laboratory Data Checklist Guidance* (p-eao-11a): <http://www.pca.state.mn.us/index.php/view-document.html?gid=16113>. Also see the MPCA Laboratory Quality Control (QC) and Data Policy: <http://www.pca.state.mn.us/index.php/view-document.html?gid=16288>.

Project Information

Project name: _____ Laboratory: _____

Work order number: _____ Report date (mm/dd/yyyy): _____

1. Preservation

For help with this section on holding times, containers and preservatives, refer to the Minnesota Department of Health's website at: <http://www.health.state.mn.us/divs/phl/environmental/handbook/internet/envhandbook.html>.

Questions	Yes	No	N/A	Comments
a. Is there a chain of custody (COC) with the report?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Is there a sample condition form with the report?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Were there samples requiring preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
i. If so, were they properly preserved?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ii. Were they received on ice?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Were samples received in the correct containers?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
i. Was there enough sample volume/weight to complete all requested analyses?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ii. Was there enough extra sample collected to complete method required batch QC?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. Were samples received with adequate holding time for sample prep for all requested analyses?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f. Are there notes about sample condition or holding time issues on the COC? Explain impact.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
g. Is there narration or data qualifiers within the report about sample condition or holding time issues? Explain impact.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

2. Calibration

Question	Yes	No	N/A	Comments
a. Do the report narrative or data qualifiers indicate calibration problems for any analyses? If yes, explain the data impact.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

3. Blanks

Question		Yes	No	N/A	Comments
a.	Do any of the analyses contain samples for field or trip blanks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	i. If yes, are there target analytes present above the reporting limit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	ii. If yes, are the same compounds also present in the samples? Explain possible impact.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b.	Do method blanks for any analyses contain target analytes above the reporting limit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	i. If yes, are the same compounds present in the samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	ii. Is the amount of target analyte in the blank more than 1/10 th of that in the sample(s)? Explain the possible impact on sample results.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

4. Surrogates

Question		Yes	No	N/A	Comments
a.	Are there organic analyses that contain surrogate compounds?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b.	Are the lab recovery limits specified on the report?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	i. Do the lab limits seem reasonable when compared with the suggested guidelines in the MPCA QC Policy?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c.	Are there surrogates outside lab limits? (These should have a data qualifier)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	i. If yes, are the surrogates above the lab limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	ii. Below the lab limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	iii. Explain what this could mean for the affected samples.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

5. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

Question		Yes	No	N/A	Comments
a.	Are there LCS/LCSD samples present for the reported analyses? (An LCS alone is acceptable if there is an Matrix Spike/Matrix Spike Duplicate [MS/MSD] or sample/sample dup for precision.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	i. If so, do the lab limits seem reasonable compared to the suggested guidelines in the MPCA QC Policy?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b.	Are there LCS/LCSD compounds outside lab limits? (These should have a data qualifier.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	i. If yes, are the analytes above the lab limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	ii. Below the lab limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	iii. Are all samples in the preparation batch also flagged for the same analyte(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	iv. Explain what this could mean for the affected samples.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

6. Matrix Spike/Matrix Spike Duplicate/Sample Duplicate (MS/MSD/Dup)

Question		Yes	No	N/A	Comments
a.	Do the analytical methods used require an MS and/or MSD? If no, skip to 6.b.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
i.	Have the required matrix spikes been prepared and reported?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ii.	If no, is there an explanation in the report as to why?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
iii.	Did the lab process an alternate spiked sample (such as LCSD) instead?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
iv.	Are the lab limits specified on the report?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
v.	Do the limits seem reasonable when compared to the suggested guidelines in the MPCA QC Policy?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
vi.	Are there compounds outside the lab limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.	If yes, are the analytes above the lab limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.	Below the lab limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.	Is the source sample also flagged for compounds outside lab limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b.	Is a sample duplicate reported for the analytical method(s)? If no, skip to 6.c.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
i.	Is the RPD for the duplicate pair within the lab limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ii.	If no, has the associated source sample been flagged?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c.	What is the impact of failed QC on this project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

7. Method Detection Limits/Report Limits

Question		Yes	No	N/A	Comments
a.	Are reporting and/or method detection limits clearly listed on the report for all analyses? (may also be called quantitation limits)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Additional comments on report: