Contaminated Sites Program
Spill Prevention and Response Division
Alaska Department of Environmental Conservation

Laboratory Data Review Checklist for Air Samples

Completed by:

Title: Date:

CS Report Name: Report Date:

Consultant Firm:

Laboratory Name: Laboratory Report Number:

DEC File Number: DEC Haz ID:

1. Laboratory
   a. Did a NELAP-certified laboratory receive and perform all of the submitted sample analyses?
      ☐ Yes ☐ No ☐ N/A (Please explain.)

   Comments:

   b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses NELAP-approved?
      ☐ Yes ☐ No ☐ N/A (Please explain.)

   Comments:

2. Chain of Custody (COC)
   a. Was the COC information completed, signed and dated (including released/received by)?
      ☐ Yes ☐ No ☐ N/A (Please explain.)

   Comments:

   b. Was the correct analyses requested?
      ☐ Yes ☐ No ☐ N/A (Please explain.)

   Comments:

3. Laboratory Sample Receipt Documentation
   a. Was the sample condition documented? Were samples collected in gas-tight, opaque/dark Summa canisters or other DEC-approved containers? Was the canister vacuum/pressure checked, recorded upon receipt and were there no open valves?
      ☐ Yes ☐ No ☐ N/A (Please explain.)

   Comments:

   b. If there were any discrepancies, were they documented? Examples include incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, canister not holding a vacuum, etc.
      ☐ Yes ☐ No ☐ N/A (Please explain.)

   Comments:

   c. Was the data quality or usability affected? (Please explain.)

   Comments:

4. Case Narrative
   a. Is there a case narrative and is it understandable?
      ☐ Yes ☐ No ☐ N/A (Please explain.)

   Comments:

   b. Were there any discrepancies, errors or QC failures identified by the lab?
      ☐ Yes ☐ No ☐ N/A (Please explain.)

   Comments:

   c. Were all corrective actions documented?
      ☐ Yes ☐ No ☐ N/A (Please explain.)

   Comments:

   d. What is the effect on data quality/usability according to the case narrative?

   Comments:

5. Samples Results
   a. Was the correct analyses performed/reported as requested on COC?
      ☐ Yes ☐ No ☐ N/A (Please explain.)

   Comments:

   b. Were the samples analyzed within 30 days of collection or within the time required by the method?
      ☐ Yes ☐ No ☐ N/A (Please explain.)

   Comments:

   c. Are the reported PQLs less than the Target Screening Level or the minimum required detection level for the project?
      ☐ Yes ☐ No ☐ N/A (Please explain.)

   Comments:

   d. Was the data quality or usability affected?

   Comments:

6. QC Samples
   a. Method Blank
      i. Was one method blank reported per analysis and 20 samples?
      ☐ Yes ☐ No ☐ N/A (Please explain.)

   Comments:

      ii. Were all method blank results less than PQL?
      ☐ Yes ☐ No ☐ N/A (Please explain.)

   Comments:

      iii. If above PQL, what samples are affected?

   Comments:

iv. Do the affected sample(s) have data flags and, if so, are the data flags clearly defined?
☐ Yes ☐ No ☐ N/A (Please explain.)

Comments:

v. Was the data quality or usability affected? (Please explain.)

Comments:

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

i. Was there one LCS/LCSD or one LCS and a sample/sample duplicate pair reported per analysis and 20 samples?
☐ Yes ☐ No ☐ N/A (Please explain.)

Comments:

ii. Accuracy – Were all percent recoveries (%R) reported and within method or laboratory limits? What were the project specified DQOs, if applicable?
☐ Yes ☐ No ☐ N/A (Please explain.)

Comments:

iii. Precision – Were all relative percent differences (RPD) reported and were they less than method or laboratory limits? What were the project-specified DQOs, if applicable.
☐ Yes ☐ No ☐ N/A (Please explain.)

Comments:

iv. If the %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

v. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
☐ Yes ☐ No ☐ N/A (Please explain.)

Comments:

vi. Is the data quality or usability affected? (Please explain.)

Comments:

c. Surrogates

i. Are surrogate recoveries reported for field, QC and laboratory samples?

☐ Yes ☐ No ☐ N/A (Please explain.)

Comments:

ii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits? What were the project-specified DQOs, if applicable?

☐ Yes ☐ No ☐ N/A (Please explain.)

Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

☐ Yes ☐ No ☐ N/A (Please explain.)

Comments:

iv. Was the data quality or usability affected? (Please explain.)

Comments:

d. Field Duplicate

i. Was one field duplicate submitted per analysis and 10 type (soil gas, indoor air, etc.) samples?

☐ Yes ☐ No ☐ N/A (Please explain.)

Comments:

ii. Were they or was it submitted blind to the lab?

☐ Yes ☐ No ☐ N/A (Please explain.)

Comments:

iii. Precision – Were all relative percent differences (RPD) less than the specified DQOs? (Recommended: 25 %)

RPD (%) = Absolute value of: $\frac{(R_1-R_2)}{((R_1+R_2)/2)} \times 100$

Where R_1 = Sample Concentration
R_2 = Field Duplicate Concentration

☐ Yes ☐ No ☐ N/A (Please explain.)

Comments:

iv. Was the data quality or usability affected? (Please explain.)

Comments:

e. Field Blank (If not used, explain why.)

☐ Yes ☐ No ☐ N/A (Please explain.)

Comments:

i. Were all results less than the PQL?

☐ Yes ☐ No ☐ N/A (Please explain.)

Comments:

ii. If above PQL, what samples are affected?

Comments:

iii. Was the data quality or usability affected? (Please explain.)

Comments:

7. <u>Other Data Flags/Qualifiers</u>

a. Were other data flags/qualifiers defined and appropriate?

☐ Yes ☐ No ☐ N/A (Please explain.)

Comments: