QA Plan – Helpful Hints

The Quality Assurance Plan (QA Plan) outlines how you will conduct radon testing. It’s expected that you will follow your QA Plan. The Minnesota Department of Health (MDH) staff will review this during audits. The QA plan contains a lot of information, if you have any questions regarding the QA plan requirements please contact the radon licensing staff.

- Dan Hylland at 651-201-4921 or dan.hylland@state.mn.us
- Deb Madsen at 651-201-4957 or deb.madsen@state.mn.us

Whether you choose to use the MDH template, a template from the manufacturer of the testing devices you use or create your own document, the QA Plan must be customized to your operation based on what type(s) of devices you use and what type(s) of testing you do.

What types of devices do you plan on using?

   - If you have only one CRM, please explain how you will test buildings with multiple foundation types and conduct required quality control. Multiple foundation types and comparison checks can be done with a combination of CRM and passive devices. The crosscheck must be done with two CRMs.
   - If you use only CRMs during routine testing but will use passive devices during required quality control measurements, then passive devices must be included in the QA plan.

2. Do you conduct testing on multi-family homes?
   - If you use CRMs, do you have enough CRMs to conduct multiple tests at once? If not, do you plan to rent, borrow or buy additional units? Do you plan on using a combination of CRMs and passive devices?

Common questions and items missed on the QA Plan

1. The QA Plan must be signed by:
   - the owner or responsible party of the organization
   - the quality assurance officer

2. The following standards must be followed during testing and must be referenced in the QA Plan, as applicable:
   - ANSI/AARST Protocol for Conducting Measurements of Radon and Radon Decay Products in Homes (ANSI/AARST MAH-2014) or successor ANSI/AARST standards, and test each unique foundation type;

3. Please read the entire document carefully and make sure you understand its contents. You will be held to these standards and MDH staff will check to ensure they are being followed.
4. Personalize the document to your organization. For the MDH template, items in <> are instructions or places you need to enter your information.

5. If you only use CRMs, remove information regarding passive devices. If you only use passive devices, remove information regarding CRMs.

6. Quality control testing is required, regardless of the type of device you use. The type varies depending on the type(s) of devices you use.
   - CRMs
     - Device must be calibrated annually and have an annual background check
     - Comparison checks or duplicates must be conducted
       - 10% of all measurement locations or 50 per month, whichever is less and must be at least three per year
     - Crosschecks are made every 5-7 months after a CRM has been calibrated and must be conducted with another CRM
   - Passive devices
     - Comparison checks or duplicates must be conducted
       - 10% of all measurement locations or 50 per month, whichever is less and must be at least three per year
     - Field blanks
       - 5% of all measurement locations or 25 per month
     - Spikes
       - Rate of 3% of measurements, minimum or 3 per year and a maximum of 6 per month

7. A template of how you notify homeowner/occupant of required test conditions

8. Radon test placement and retrieval checklist

9. Reporting form for how results are sent to clients

10. The log you are using to track quality control testing. MDH has a template you may use on Licensing for Radon Measurement Professionals
    http://www.health.state.mn.us/divs/eh/indoorair/radon/measurementprof.html

11. Standard operating procedures for your device(s). Please include a link to your manufacturer’s instructions or include a copy of them in the QA Plan.

12. If you use a CRM, explain how you are tracking when those have been calibrated and require calibration (e.g. calibration logs, calibration certificates)

**Multifamily buildings**

1. Inform Client About Required Test Conditions: Provide an example of your notifications for Multifamily Buildings. See Section 2.4 and exhibits 3-9 of MAMF-2017. (Address on page 11 and Exhibits A and B if using the MDH QA Plan template)

2. Radon Test Placement and Retrieval Checklist: Provide a checklist for Multifamily Buildings. See Section 6.2 and 7 of MAMF-2017

3. Summary report: Provide what will be provided on the radon test results report for Multifamily Buildings. See Section 7 (Address on page 14 and Exhibit F if using the MDH QA Plan template)

4. Detector Chain of Custody: Provide a chain of custody for Multifamily Buildings. See CG Section 4 of MAMF-207. (Address on page 12 and Exhibit C if using the MDH QA Plan template)

5. Comparison checks or duplicates: When conducting sampling in Multifamily Buildings, there is not a maximum amount of duplications. It shall be equal to or greater than 10% of all testing locations. (Address on page 12 and Exhibit C if using the MDH QA Plan template)
6. **Blanks and Spikes:** Provide how blanks and spikes will be conducted. There are additional requirements for sampling in Multifamily Buildings. See Section 5 of MAMF-2017. (Address on pages 17-18 if using the MDH QA Plan template)

7. **Voluntary Compliance Form:** Provide a voluntary compliance form for multifamily buildings. See Exhibits 3-4 of MAMF-2017. (Address in Exhibit D if using the MDH QA Plan template)

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**Schools and large buildings**

1. **Minimum test period:** Schools and Large Buildings short-term tests must be conducted for a minimum of 3 days.

2. **Inform Client About Required Test Conditions:** Provide an example of your notifications for Schools and Large Buildings. See Section II and Exhibits 3-5 of MALB 2014. (Address on page 11 and Exhibits A and B if using the MDH QA Plan template)

3. **Radon Test Placement and Retrieval Checklist:** Provide a checklist for Schools and Large Buildings. See Sections 2, 6 and 7 of MALB 2014. (Address in Exhibit C if using the MDH QA Plan template)

4. **Summary report:** Provide what will be provided on the radon test results report for Schools and Large Buildings. See Section 7 and Appendix E of MALB 2014. (Address on page 14 and Exhibit F if using the MDH QA Plan template)

5. **Detector Chain of Custody:** Provide a chain of custody for Schools and Large Buildings. See Exhibits 2A-2B of MALB 2014. (Address on page 12 and Exhibit C if using the MDH QA Plan template)

6. **Comparison checks or duplicates:** When conducting sampling in Schools and Large Buildings, there is not a maximum amount of duplications. Section 5 of MALB 2014. It shall be equal to or greater than 10% of all testing locations. (Address on page 12 and Exhibit C if using the MDH QA Plan template)

7. **Blanks and Spikes:** Provide how blanks and spikes will be conducted. There are additional requirements for sampling in Schools and Large Buildings. See Section 5 of MALB 2014. (Address on pages 17-18 if using the MDH QA Plan template)