

# Continuous Chlorination Verification Log

Homeowner worksheet — model-agnostic, not an official inspection, laboratory report, code document, or certification

Use this log to document what a private-well continuous chlorination system actually did on a particular date and under a particular flow condition. Complete only the observations and tests that the equipment manual permits a homeowner to perform safely. Do not open energized controls, test live wiring, disconnect pressurized chemical lines, open the well, pull a pump, enter a tank or confined space, or mix chlorine with acid.

If a certified-laboratory result reports harmful germs or chemicals, the chlorination target is unknown, the tank is empty, the pump is faulted, or a valid post-contact free-chlorine result is absent or below the approved target, use a safe alternate source for drinking, cooking, ice, brushing teeth, and infant formula. The CDC's private-well safety guidance advises using bottled water or another safe source until contaminated water has been treated and tested. Contact your health department and a qualified well or water-treatment professional.

## 1. System identity and approved target

| Field                                    | Record                                           |
|------------------------------------------|--------------------------------------------------|
| Property / system location               | _____                                            |
| Date and time                            | _____                                            |
| Pump model and serial number             | _____                                            |
| Chlorine product and active strength     | _____                                            |
| Product label / SDS available?           | yes / no                                         |
| Design or installer target free chlorine | _____                                            |
| Required contact volume and/or time      | _____                                            |
| Design flow or peak-flow basis           | _____                                            |
| Control mode                             | flow-proportional / fixed-rate / timed / unknown |
| Sample point after contact               | _____                                            |
| Farthest practical sample point          | _____                                            |
| Latest bacteria result and date          | _____                                            |

If the design target, chemical strength, contact basis, or control mode is unknown, record "unknown" and stop before changing settings. A generic number is not a substitute for the installed design.

## 2. Safety and visible condition check

Check only from a safe position. Do not remove covers or loosen fittings.

- ☐ Safe alternate drinking water is available if the system is not verified.
- ☐ No chlorine/acid or unknown chemical mixing has occurred.
- ☐ Solution tank is closed, stable, and not visibly leaking.
- ☐ Tank level is recorded below; low-level warning is absent or documented.
- ☐ Pump housing, tubing, fittings, and visible injection assembly show no leak.

- ☐ Pump indicators are recorded without opening the control enclosure.
- ☐ Well cap, wellhead, pressure vessel, and wiring will not be opened or tested by the homeowner.

Visible condition / alarm notes:

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### 3. Water-flow record

Use a safe faucet or drain point. Do not defeat a pressure switch or create a flooding hazard.

| Trial              | Known volume (gal) | Collection time (sec) | Flow estimate (gpm)                | Other water use? |
|--------------------|--------------------|-----------------------|------------------------------------|------------------|
| 1                  | _____              | _____                 | volume ÷ (seconds ÷ 60) =<br>_____ | yes / no         |
| 2                  | _____              | _____                 | volume ÷ (seconds ÷ 60) =<br>_____ | yes / no         |
| 3 / peak condition | _____              | _____                 | volume ÷ (seconds ÷ 60) =<br>_____ | yes / no         |

Observed flow used for comparison with design: \_\_\_\_\_ gpm

This is a repeatable screening observation, not a certified well-yield or pump-capacity test. Record the range if readings vary.

### 4. Pump response and output

Record pump behavior from the outside. If the manual provides a homeowner-safe calibration procedure, follow it exactly. Otherwise mark "professional." Stenner states that its S128 chart output is approximate and recommends field calibration to confirm actual output; that principle is product-specific but useful for this record. See the S128 manufacturer page.

| Field                                        | Record                                                     |
|----------------------------------------------|------------------------------------------------------------|
| Pump setting / timer setting                 | _____                                                      |
| Expected meter, flow-switch, or timer signal | _____                                                      |
| Signal observed?                             | yes / no / unknown                                         |
| Pump run or pulse observed?                  | yes / no                                                   |
| Low-level / leak / fault / overrun indicator | _____                                                      |
| Solution level before test                   | _____                                                      |
| Solution level after test                    | _____                                                      |
| Approved calibration method used             | _____                                                      |
| Collection time                              | _____                                                      |
| Measured solution output                     | _____                                                      |
| Output measured by                           | homeowner per manual / qualified professional / not tested |

Do not infer: a running motor does not prove that solution entered the water; a full tank does not prove that solution has full strength; a nominal ratio does not prove actual output.

### 5. Solution and contact-stage record

Virginia Tech Extension notes that liquid hypochlorite degrades over time. Record the product and age instead of correcting a low residual by smell or guesswork. See Virginia Tech's treatment guidance.

| Field                                 | Record        |
|---------------------------------------|---------------|
| Product name and strength             | _____         |
| Date purchased / mixed / opened       | _____         |
| Storage condition or visible change   | _____         |
| Usable contact volume after injection | _____ gal     |
| Observed or design flow               | _____ gpm     |
| Screening estimate: volume ÷ flow     | _____ minutes |
| Approved required contact time        | _____ minutes |
| Bypass, mixing, or baffle information | _____         |

The volume ÷ flow result is only a screening estimate. It does not validate effective contact time, tank mixing, or disinfection. Do not change pressure-switch settings or restrict plumbing to force the arithmetic to match.

## 6. Free-chlorine sample record

Use a kit that explicitly measures free chlorine. For a quality-controlled field method, the Minnesota Department of Health guide describes DPD colorimetry, unexpired reagent, the correct vial volume, and flushing old water before sampling. Minnesota's compliance requirements apply to regulated systems, not automatically to a private home.

| Field                    | After-contact point  | Farthest practical point |
|--------------------------|----------------------|--------------------------|
| Tap / sample location    | _____                | _____                    |
| Flush duration           | _____ min            | _____ min                |
| Time and flow condition  | _____                | _____                    |
| Kit / method             | _____                | _____                    |
| Reagent expiry           | _____                | _____                    |
| Free chlorine result     | _____ mg/L or ppm    | _____ mg/L or ppm        |
| Design target comparison | at / below / unknown | at / below / unknown     |
| Repeat result if needed  | _____                | _____                    |

### Interpretation:

- At or above the approved target: record the condition; it is not proof that the well is permanently safe. - Below target or no measurable residual: stop drinking and cooking with the water until corrected and retested; do not blindly increase the setting. - Unknown target, expired reagent, wrong sample point, or total-chlorine-only result: treat the system as unverified.

Odor is not a pass/fail result. Chlorine demand can vary with water chemistry. MU Extension explains that demand, concentration, contact time, pH, temperature, turbidity, iron, manganese, hydrogen sulfide, and ammonia can affect chlorination; see Bacteria in Drinking Water.

## 7. Decision and handoff

Check one primary outcome:

- ☐ Verified for this test condition: target documented; flow and contact basis recorded; pump response/output evidence recorded; valid free-chlorine result met target.
- ☐ Investigate and retest: one or more measurements disagree, but no confirmed contamination is known. Professional needed for pump, injection path, contact stage, chemistry, or electrical/pressure work.
- ☐ Stop drinking/cooking and escalate: positive bacteria or harmful-chemical result; absent/below residual; empty tank; pump fault; unknown target; or unsafe system condition.

Likely branch: feed/control / old or diluted solution / blocked injection path / inadequate contact / chlorine demand / sampling error / contamination source / unknown

Evidence supporting branch:

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Next safe action and owner:

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Professional / laboratory / health department contacted: \_\_\_\_\_

Retest date and required sample: \_\_\_\_\_

Keep this log with the pump manual, chemical label, laboratory reports, and service invoices. EPA recommends annual private-well testing for total coliform bacteria, nitrates, total dissolved solids, and pH, with additional testing based on local conditions; see Protect Your Home's Water.