READY TO INSPECT — FIELD CHECKLIST

Water treatment chemical feed system annual maintenance checklist

The annual chemical feed system service is the deep pass: the measurements, cleanings and tests a quarterly round doesn't reach. This checklist keeps the full service on record with the photos that make it defensible later. Work is commonly verified against manufacturer's published instructions. Confirm the edition your authority having jurisdiction has adopted.

Who runs it: The water treatment service contractor on the annual service, when the loop can be sampled and the controller taken through its ranges. When: Once a year, timed with the closed-loop and condenser-water annual so probe drift and pump output get corrected against a real sample.

Pump calibration

- [ ] Metering pump output verified by draw-down
  Pump timed against a calibration column or measured draw-down, actual output compared to the setting and corrected, not read off the dial.
  No photo required

- [ ] Pump head flushed with water before opening
  Suction moved to clean water and the pump run until product is flushed from the head and discharge line, with the SDS's PPE on, before any wetted part is opened.
  No photo required

- [ ] Metering pumps and feed outputs locked and tagged
  Every metering pump and controller feed output locked and tagged; head closed up, locks lifted by whoever hung them for the controller tests, then re-locked before the quill is pulled.
  1 photo required

- [ ] Diaphragm and valves inspected
  Pump head opened where due, diaphragm and suction/discharge valves inspected for swelling or crystallization, seals replaced per the service kit.
  1 photo required

Controller and probes

- [ ] Test kit reagents and reference solution in date
  Reagent bottles and the probe reference solution labels read for expiry and lot, out-of-date stock replaced before any reading from them is trusted.
  1 photo required

- [ ] Probe cleaned and checked against reference
  Conductivity or ORP probe pulled, cleaned of scale and film, then checked against a known reference solution and calibrated to it.
  No photo required

- [ ] Setpoints and alarms exercised
  Controller taken through its dosing and bleed setpoints, low-level and no-flow alarms confirmed to interrupt feed as intended.
  No photo required

Injection and delivery

- [ ] Injection point isolated and relieved before the quill
  Isolation valve at the quill closed, or that loop section isolated and drained per the site's procedure, pressure relieved at a bleed with face and hand PPE on.
  No photo required

- [ ] Injection quill pulled and cleared
  Quill removed from the line, scale and crystallization cleared, check valve reseating cleanly, quill reinstalled to the correct depth in the flow.
  2 photos required

- [ ] Tubing runs replaced where degraded
  Suction and discharge tubing checked end to end for hardening and cracking, sections replaced where degraded, containment cleaned out.
  1 photo required
- [ ] Bypass feeder drained and inspected inside
  Where a pot feeder is fitted, isolated, relieved and drained, interior checked for sludge and corrosion, filter bag or strainer and cap gasket renewed where worn.
  No photo required
- [ ] Bleed solenoid and strainer cleaned
  On condenser-water systems, bleed solenoid and strainer isolated and cleared of scale, seat checked for weeping, then seen to open on the controller's call once feed is back.
  No photo required

Return to service

- [ ] Locks removed and feed restored to auto
  Locks removed by whoever hung them, injection and feeder valves reopened, controller in auto, pump seen to stroke and drum level drop, no weep at the reinstalled quill.
  1 photo required
- [ ] Treatment contractor's annual report on file
  Report with pump calibration, probe reference results and settings left on file, set against the treatment program's targets, and handed to the owner.
  No photo required