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# Remove Weak/Contaminated Head Concrete QA Checklist

Remove weak/contaminated head concrete using an interactive checklist that is commentable and export as PDF/Excel; verify soundness with hammer, chisel, and tests before removal.

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| Project: | |
| Date: | |
| Filled by: | |
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| Pre-Work Controls | |
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| 1 | Verify approved scope, drawings, and specifications for head concrete verification; acceptance: written confirmation by site supervisor and QA lead; evidence: signed inspection request and uploaded PDFs. |
| 2 | Check calibration and condition of rebound hammer and pull-off tester; method: review calibration within 12 months; acceptance: valid serials and dates; evidence: photos of labels and certificates. |
| 3 | Establish an exclusion zone using 1.8 m barriers and signage; acceptance: perimeter continuous and recorded in the daily log; evidence: wide-angle site photos and log entry ID. |
| 4 | Confirm lighting ≥300 lx at the surface with a lux meter; acceptance: measured value ≥300 lx; evidence: meter reading photo and recorded lux value. |

| Evidence of Contamination and Weakness | |
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| 5 | Conduct visual survey for laitance, mud, oil, honeycombing, or discoloration using a 1 m × 1 m grid; acceptance: defects mapped; evidence: annotated photos with grid overlay and legend. |
| 6 | Measure surface moisture at four quadrants using a concrete moisture meter; acceptance: readings recorded with any anomalies noted; evidence: % readings and photos at each quadrant. |
| 7 | Perform scratch/pick test with a pointed chisel under light hand pressure; acceptance: classify as sound/soft per project method; evidence: observed penetration depth in mm and close-up photos. |
| 8 | Complete hammer sounding using a 1 kg hammer, listening for dull versus ringing tones; acceptance: hollow areas delineated; evidence: paint marks on surface and audio note (if captured). |

| Soundness Verification Tests | |
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| 9 | Execute Schmidt rebound hammer test: 10 impacts at each suspect and control area; acceptance: mean within project-accepted range relative to control; evidence: table of values, mean/SD, and photos. |
| 10 | Run pull-off adhesion test with Ø50 mm dollies bonded using approved epoxy; acceptance: tensile strength and failure mode recorded; evidence: kPa result, failure photo, and dolly ID. |
| 11 | Perform phenolphthalein carbonation check on fresh fracture or drilled dust; acceptance: color change depth documented; evidence: measured depth in mm and photo of indicator reaction. |
| 12 | Conduct chloride spot test on drilled powder from suspect zones; acceptance: presence/absence recorded with lot details of test kit; evidence: test strip photo and sampling location sketch. |
| 13 | Take concrete cores Ø50–75 mm if required by specifications; acceptance: chain of custody completed; evidence: core ID, depth in mm, sealed bag photo, and lab request form. |

| Limits and Protection Measures | |
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| 14 | Mark removal limits around weak/contaminated areas with contrasting paint and measured offsets; acceptance: continuous boundary defined; evidence: dimensioned sketch and overview photos. |
| 15 | Scan for reinforcement/embeds within 200 mm of planned limits using a cover meter; acceptance: locations and depths logged; evidence: scan screenshots and marked plan. |
| 16 | Install protective wraps/caps on exposed reinforcement and sensitive embeds; acceptance: full coverage without gaps; evidence: photos and protective material lot numbers. |
| 17 | Set a formal hold point: no breaking until QA acceptance is recorded; acceptance: dated sign-off by supervisor and client representative; evidence: digital signatures in checklist. |

| Environmental and Safety Controls | |
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| 18 | Confirm H-class vacuum and/or water suppression equipment is available and functional; acceptance: function test passed; evidence: equipment serial numbers and function test photo. |
| 19 | Verify PPE availability and fit: respirators (P2/P3), eye, hearing, gloves, boots; acceptance: crew checks complete; evidence: fit-test records and sign-in sheet. |
| 20 | Prepare labeled containers for contaminated concrete and slurry segregation; acceptance: containers in place and labeled; evidence: container photos and disposal route documentation. |
| 21 | Set baseline noise (dB(A)) and vibration (mm/s) at nearest receptor; acceptance: initial readings logged; evidence: meter screen photos and recorded values. |

| Documentation and Acceptance | |
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| 22 | Compile a condition map combining visual, sounding, and test results; acceptance: legend, scale, and north arrow present; evidence: uploaded PDF with date/time/GPS stamps. |
| 23 | Issue a Verification Report recommending removal extent per approved project specifications and authority requirements; acceptance: reviewer approval; evidence: review comments and approval record. |
| 24 | Brief the removal crew on marked limits, protection, and controls without instructing breaking methods; acceptance: toolbox talk completed; evidence: attendance sheet and briefing minutes. |
| 25 | Archive pre-removal photos, test data, and signed hold point within the interactive checklist; acceptance: all required fields complete; evidence: system status 100% and QR snapshot. |

**Comments:**

Filled by:

Signature:

| Introduction | How to use this checklist |
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| Remove weak/contaminated head concrete requires disciplined verification to define removal limits without damaging sound material. This checklist focuses on pile head concrete and other structural head zones where laitance, contamination, or weak paste may exist. It guides supervisors through visual mapping, hammer sounding, chisel probing, and selective testing—rebound hammer, pull-off adhesion, carbonation, and chloride checks—to confirm soundness. The aim is to identify defective concrete, protect reinforcement, and set clear boundaries per approved project specifications and authority requirements. We do not cover the breaking process; instead, we establish hold points, document acceptance cues, and prepare the workface for controlled removal by others. By standardizing evidence, you reduce scope creep, prevent over-break, and protect nearby embeds. Use this interactive, commentable checklist to tick tasks, attach photos and readings, and secure approvals. When complete, export PDF/Excel with an embedded QR for authentication and project archiving. | 1. Preparation: gather rebound hammer, pull-off tester, phenolphthalein, chloride kit, cover meter, lux and moisture meters, PPE (P2/P3 respirators, eye, hearing, gloves, boots), barriers, and marking paint. 2. Create a new checklist session: enter project, location, element ID, and reference drawings; invite stakeholders (QA, site supervisor, client) with commenting permissions. 3. Perform visual, sounding, and chisel checks; capture photos and notes directly in the checklist under each step, tagging grid locations and suspected zones. 4. Add quantitative test data: input rebound values, pull-off results, carbonation depths, chloride outcomes; attach meter photos and save GPS/time stamps. 5. Mark removal limits on-site and upload a dimensioned sketch; set a hold point and request review inside the checklist using the comment thread. 6. Review and resolve comments: address queries, add clarifications, and record any changes to limits or protections until all approvers tick acceptance. 7. Export deliverables: generate a commentable audit trail and export as PDF/Excel; share the QR code so crews can verify the latest approved version. 8. Sign-Off: capture digital signatures from supervisor and client, distribute to the removal team, and archive the session with QR-authenticated records. |