SOLAR WATER HEATER INSPECTION CHECKLIST

GENERAL INFORMATION

Name: _____

Date: _____

Location: _____

Photovoltaic Module Arrays and Mounting Hardware

☐ Yes ☐ No — Solar module tempered glass panels show no micro-cracking, snail trails, or delamination

☐ Yes ☐ No — Module frame clamps and racking hardware bolts maintain specified torque ratings

☐ Yes ☐ No — Array surface is free of heavy soil accumulation, bird fouling, and vegetation shading

☐ Yes ☐ No — Module junction boxes on panel undersides are sealed with strain relief glands intact

Single-Axis Tracker Drive and Articulation Linkages

☐ Yes ☐ No — Slew drive motors, torque tubes, and drive linkages operate smoothly across full tilt range

☐ Yes ☐ No — Tracker controller inclinometers accurately report sun-tracking angles without error

☐ Yes ☐ No — Drive bearings and damper shock absorbers show no physical deformation or fluid leaks

☐ Yes ☐ No — Emergency stow mode automatically engages during simulated high wind-speed alarm

DC String Cabling and Combiner Box Enclosures

☐ Yes ☐ No — DC string wire harness cable trays keep cables elevated above ground with UV zip ties intact

☐ Yes ☐ No — String combiner box enclosures maintain NEMA 4X weather tightness with gasket seals intact

☐ Yes ☐ No — DC fuses, finger-safe fuse holders, and surge arresters show no discoloration or heat marks

☐ Yes ☐ No — String current monitoring transducers communicate telemetry to SCADA system accurately

Central Inverter Stations and Step-Up Transformers

☐ Yes ☐ No — Inverter enclosure intake air filters and forced ventilation cooling fans run freely

☐ Yes ☐ No — Inverter IGBT semiconductor power stacks and DC bus capacitors show no thermal distress

☐ Yes ☐ No — Inverter AC output circuit breaker disconnect handle locks positively in open and closed states

☐ Yes ☐ No — Medium-voltage step-up transformer oil level, temperature gauges, and silica gel breathers are normal

Grounding Grid, Perimeter Security, and Site Safety

☐ Yes ☐ No — Array equipment grounding conductors and copper bonding jumpers are firmly bonded

☐ Yes ☐ No — High-voltage warning placards, arc flash labels, and emergency disconnect signs are legible

☐ Yes ☐ No — Perimeter security chain-link fencing, barbed wire strands, and entry gates remain undamaged

☐ Yes ☐ No — Vegetation buffer zones beneath PV tables are mowed and cleared of dry wildfire fuel

FINAL NOTES

Inspector Comments:

_____

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_____

Inspector Name: _____

Inspector Email: _____

Inspection Date: _____

☐ **I confirm this inspection was completed accurately**

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