JOB HAZARD ANALYSIS (JHA)

Business name

Document: JHA-001 Rev 1
Prepared: Nov 9, 2026
Review by: Dec 9, 2026
Highest risk after controls: Medium

1. BUSINESS AND JOB DETAILS

Job	Solar panel cleaning	**Start date**	Nov 9, 2026
Working hours	7:00 am to 3:30 pm	**Trade**	Solar

2. JOB STEPS, HAZARDS AND CONTROLS

#	Job step	Hazards	Risk before	Controls	Risk after	Responsible
1	Set up roof access and edge protection or harness	Falling from a roof edge Falling from a ladder Rules: 29 CFR 1926 Subpart M; 29 CFR 1926 Subpart X	**Critical Likely / Fatality**	1.1 Do what you can from the ground or from a scaffold at the gutter line, for example pre-assemble parts on the ground. [Elimination] 1.2 Install edge protection or guardrails on all open roof edges before work starts. [Engineering (guarding)] 1.3 Use a perimeter scaffold with handrails and toe boards along the eaves where practical. [Engineering] 1.4 Where guardrails cannot be fitted, use fall restraint on certified roof anchors so workers cannot reach the edge. [Engineering] 1.5 Low-slope roofs: guardrails, safety nets, personal fall arrest, or a warning line combined with one of these or with a safety monitor (a safety monitor alone only on roofs 50 feet wide or less). Steep roofs: guardrails with toe boards, safety nets or personal fall arrest (29 CFR 1926.501(b)(10), (11)). [Administrative] 1.6 Use one safe, controlled access point and keep others off the roof. [Administrative] 1.7 Stop roof work in strong wind or rain, and when the roof is wet, icy or covered in dust or frost. [Administrative] 1.8 Wear a harness clipped to a rated anchor when using restraint or fall arrest, and soft-soled non-slip boots. [PPE] 1.9 Use a platform ladder, mobile scaffold or aerial lift for longer jobs instead of a straight ladder. [Substitution] 1.10 Use Type I, IA or IAA ladders in good condition. Tag and remove any damaged ladder. [Engineering] 1.11 Set extension ladders at a 4 to 1 angle on firm, level ground, secured, and reaching 3 feet above the landing. [Engineering] 1.12 Use ladders only for short, light work. Do not carry heavy or awkward loads up a ladder. [Administrative] 1.13 Keep three points of contact and your belt buckle between the stiles. Do not overreach. [Administrative] 1.14 Do not stand on the top three rungs of an extension ladder or the top step of a stepladder. [Administrative]	**Medium Unlikely / Serious injury**	Site supervisor

#	Job step	Hazards	Risk before	Controls	Risk after	Responsible
				1.15 Check the ladder before each use: feet, rungs, side rails and locks. [Administrative] 1.16 Wear non-slip safety boots with clean soles. [PPE]		
2	Never stand on panels and watch for wet slippery surfaces	Slips and trips Glass handling and breakage	**High Possible / Serious injury**	2.1 Plan walkways and keep them clear of materials, hoses and leads. [Elimination] 2.2 Run cords and hoses overhead on hooks or stands, or along walls, not across walkways. [Engineering] 2.3 Fill or cover holes, and lay boards or mats on muddy access paths. [Engineering] 2.4 Clean up offcuts, packaging and spills as you go, not at the end of the day. [Administrative] 2.5 Keep work areas, stairs and access paths well lit. [Administrative] 2.6 Wear safety boots with good grip, laced up. [PPE] 2.7 Use suction lifters, glass trolleys or a glazing robot for large panes. [Engineering] 2.8 Store glass upright on racks and secure it. Never lay it flat or lean it loosely. [Engineering] 2.9 Use two or more people for large panes, and clear the carry route first. [Administrative] 2.10 Mark new glass with tape or stickers so nobody walks into it. [Administrative] 2.11 Clean up broken glass straight away into a marked container. [Administrative] 2.12 Wear cut-resistant gloves, arm guards, safety glasses and safety boots. [PPE]	**Medium Unlikely / Serious injury**	Site supervisor
3	Check for damaged panels or cables before cleaning	Electric shock from live wiring Rules: 29 CFR 1926 Subpart K	**Critical Possible / Fatality**	3.1 Isolate the power before any work. Do not work live. [Elimination] 3.2 Lock out and tag the disconnecting means with your own personal lock and tag so the circuit cannot be energized (29 CFR 1926.417). [Engineering (guarding)] 3.3 Test before you touch: prove dead at the point of work with a tested voltage tester. [Engineering] 3.4 Only qualified persons work on or near exposed energized parts. [Administrative] 3.5 Check for back feeds from solar, batteries and generators that can keep a circuit live after the main switch is off. [Administrative] 3.6 If energized work cannot be avoided, use an energized work permit, a safety observer and insulated tools, following NFPA 70E. [Administrative] 3.7 Wear insulated gloves, arc-rated clothing and a face shield when testing or working near live parts. [PPE]	**Medium Rare / Fatality**	Site supervisor
4	Clean with low pressure water and soft brushes	High pressure water jetting Electric shock from live wiring Rules: 29 CFR 1926 Subpart K	**Critical Possible / Fatality**	4.1 Set an exclusion zone around the jetting area. [Engineering (guarding)] 4.2 Use a dead man's trigger that stops the jet when released, and check hoses and fittings before use.	**Medium Rare / Fatality**	Site supervisor

#	Job step	Hazards	Risk before	Controls	Risk after	Responsible
				[Engineering] 4.3 Only trained operators use high pressure jetting gear. [Administrative] 4.4 Never point the lance at anyone or put a hand in front of it. [Administrative] 4.5 Treat any jetting injury as serious and go to hospital, even if it looks small. [Administrative] 4.6 Wear a face shield, waterproof clothing, gloves, hearing protection and safety boots. [PPE] 4.7 Electric shock from live wiring: see step 3 for the full controls [Administrative]		
5	Watch for birds, nests and wasps under panels	Bites and stings	**Medium Possible / Recordable / lost time**	5.1 Check work areas before starting, and get pest control to remove nests. [Elimination] 5.2 Look before you reach into dark spaces. [Administrative] 5.3 Ask owners to keep pets away from the work area. [Administrative] 5.4 Know who has allergies and keep their medication, such as an epinephrine auto-injector, close by. [Administrative] 5.5 Wear gloves, long sleeves and boots. Use insect repellent outdoors. [PPE]	**Medium Unlikely / Recordable / lost time**	Site supervisor
6	Clean up and remove access	Heat stress Poor housekeeping and waste Rules: OSH Act Section 5(a)(1) General Duty Clause; state heat rules where they apply (Cal/OSHA T8 3395, WA WAC 296-62-095, OR OAR 437-002-0156, MD COMAR 09.12.32)	**High Possible / Serious injury**	6.1 Schedule heavy work for the cooler part of the day. [Elimination] 6.2 Provide shade over work and rest areas, and fans or cooling in attics. [Engineering] 6.3 Supply cool drinking water close by and drink a cup every 15 to 20 minutes. [Administrative] 6.4 Take regular rest breaks in the shade, more often as it gets hotter. [Administrative] 6.5 Let new and returning workers build up to full work in the heat over about a week. [Administrative] 6.6 Watch each other for dizziness, headache, confusion or stopping sweating. Stop work, cool down and get help. [Administrative] 6.7 Have a hot weather plan, including when work stops. [Administrative] 6.8 In California, Washington, Oregon and Maryland, follow the state heat illness rule: written plan, shade, water, rest and high-heat procedures. [Administrative] 6.9 Wear light, loose, long-sleeved clothing, a hat or brim, and sunscreen. [PPE] 6.10 Order materials to size and send packaging back where you can. [Elimination] 6.11 Put dumpsters and waste chutes close to the work. [Engineering] 6.12 Clean as you go, and do a full clean up at the end of each day. [Administrative] 6.13 Keep exits, stairs and walkways clear at all times. [Administrative]	**Medium Unlikely / Serious injury**	Site supervisor

#	Job step	Hazards	Risk before	Controls	Risk after	Responsible
				6.14 Stack materials neatly on level ground, away from edges. [Administrative] 6.15 Wear gloves when handling waste. [PPE]		

Risk key: risk = likelihood x consequence on a 5 x 5 matrix. Low, Medium, High, Critical. Work must not start while the risk after controls is high or above. Controls are listed in order of the hierarchy of controls: Elimination, Substitution, Engineering (guarding), Engineering, Administrative, PPE.

3. PPE AND PERMITS

Required PPE	Permits and plans
Safety-toe boots (ASTM F2413) Personal fall arrest system (harness) Work gloves Sun protection (sunscreen, hat, long sleeves) Hard hat (ANSI Z89.1) Cut-resistant gloves Safety glasses (ANSI Z87.1) Rubber insulating gloves Arc flash PPE (NFPA 70E) Face shield (ANSI Z87.1) Coveralls Hearing protection (earmuffs or plugs)	Written fall protection plan (only where guardrails, nets or personal fall arrest are not feasible, 1926.502(k)) Lockout/tagout (1926.417)

4. PLANT AND EQUIPMENT

Plant / equipment	License or training needed	Inspection needed	Rego / ID	Last inspected	Certificate / report
Extension ladder		Inspected by a competent person for visible defects periodically and after any event that could affect safe use (29 CFR 1926.1053(b)(15))			
Pressure washer					
Hand tools					

5. TRAINING REQUIRED FOR THIS WORK

- Fall protection training by a competent person, with a written certification record (29 CFR 1926.503)
- Ladder safety training by a competent person (29 CFR 1926.1060)
- Qualified person training for work on or near exposed energized parts (29 CFR 1926.416, NFPA 70E)

6. CREW TRAINING AND CERTIFICATIONS

Crew listed at sign-on below, with ticket and licence numbers.

7. EMERGENCY ARRANGEMENTS

Emergency number	911	**First aid kit**	In the work vehicle
Fire extinguisher	In the work vehicle	**Alarm and evacuation**	Shout for help and stop work. Make the area safe and go to the assembly point. Call the emergency number and send someone to meet the ambulance.
Reporting incidents	Report a fatality to OSHA within 8 hours, and an in-patient hospitalization, amputation or eye loss within 24 hours.		

8. MONITORING, REVIEW AND LEGAL BASIS

A competent person inspects the job site, materials and equipment before work each day and as conditions change (29 CFR 1926.20(b)(2)). Any time this JHA is revised, the affected crew is re-briefed and signs again.

Legal basis: OSH Act Section 5(a)(1) and 29 CFR 1926, Safety and Health Regulations for Construction (incl. 1926.20 and 1926.21). OSHA requires employers to find and fix hazards and to train workers on them. A JHA breaks the job into steps, lists the hazards in each step and the controls that protect the crew. General contractors often require one before you start.

Keep this JHA on site during the job, and keep it with the training and inspection records for at least 1 year after the job (longer if your state plan or general contractor requires it). OSHA does not set a retention period for JHAs themselves.

9. REVISION HISTORY

Rev	Date	By	What changed
1	Nov 9, 2026		First issue

10. SIGN-OFF

	Name	Signature	Date	
Prepared by				
Supervisor				
General contractor review				Accepted for use: Yes / No

By signing below, each crew member confirms they were trained on the hazards and controls in this JHA before work started, and will follow it. Stop work and tell the supervisor if conditions change.

Name	Role / company	Tickets / licences	Signature	Date

Name	Role / company	Tickets / licences	Signature	Date