

Pre-Startup Safety Review (PSSR) template

One form for ONE pre-startup review of ONE new or modified facility or unit, completed before hazardous chemicals are introduced: the change it belongs to, who reviewed, the checks in groups A to H each answered Yes, No or N/A with an evidence reference, the open items (each with an owner, a due date and whether it blocks start-up), the start-up decision, who authorised it and whether they were independent, and sign-off. The checks follow the matters that paragraph (i) of the US process safety standard (29 CFR 1910.119) and 40 CFR 68.77 say the review confirms (not reviewed by OSHA); where the form adds something it says so. That rule and its British counterpart (COMAH) cover only some processes, and this form supplies no limit, setting or threshold: write the value and its source. Nothing here is legal advice.

Record	How it differs from this form
Management of change	Decides whether the change may be made (qhsetech.com/templates/management-of-change-template). This form checks, after the work and before start-up, that the plant matches it and that the MOC is closed. Write the MOC number in section 1.
Permit to work	Controls one job on the plant as it stands. Permits for hot work or entry are closed before start-up (check H5); they do not replace this review.
Safety device bypass record	One bypass of one safety device (qhsetech.com/templates/safety-device-bypass-record-template). A device still bypassed at start-up needs its own open record and an item in section 4.

1 Review record

PSSR reference	Facility or unit	PSSR lead (name, role)	Planned start-up date
Change or project reference (MOC record number)		Project or turnaround number	Date the review was held
Scope of the change ☐ New facility ☐ Modified facility (changes the process safety information) ☐ Restart after turnaround ☐ Replacement in kind		What is changing, and why 	
Hazardous chemicals to be introduced		Quantity or inventory and where they enter the process	

A pre-startup review is required by the US rule for new facilities and for modified facilities when the modification is significant enough to require a change in the process safety information; a replacement in kind (one that satisfies the design specification) is outside management of change. Whether your own procedure still wants a review for a smaller job is yours to say here.

2 Reviewers

Reviewer (name)	Role or function	Groups checked (A to H)	Independent of the design and construction? (Y / N)

Form's own suggestion: include someone who will operate the plant and someone who will maintain it, and a reviewer who did not design or build it.

3 Checks: answer every row Yes, No or N/A

Tick one box per row and write where the evidence is (test certificate, signed loop sheet, marked-up drawing, minutes, permit number). A **No** is an open item: copy it into section 4 with its row number. An **N/A** needs a reason in the evidence column. Rows A1, C1 to C4, D1, D2, E1 and F1 follow the four matters paragraph (i) of the US standard says the review confirms; F2, F3 and G3 follow the change rules in paragraph (l); D3 follows nonmandatory guidance in its Appendix C. Every other row is practice carried over from the earlier checklist or added by this form, and none is taken from a rule.

A Construction and equipment per design	Yes	No	N/A	Evidence reference (record, document, date)
A1 Construction is in accordance with the design specifications (P&IDs, isometrics, datasheets).	☐	☐	☐	
A2 Walk-down completed; no temporary supports, blinds, jumpers or test fixtures remain unless documented.	☐	☐	☐	
A3 Materials of construction verified against positive material identification (PMI) records for critical lines and components.	☐	☐	☐	
A4 Pressure testing (hydrostatic or pneumatic) completed and signed off; certificates filed.	☐	☐	☐	
A5 Insulation, fireproofing and tracing complete per specification.	☐	☐	☐	
A6 Rotating equipment alignment, lubrication and run-in completed.	☐	☐	☐	
A7 Relief devices installed, set, sealed and tagged per the relief study.	☐	☐	☐	
A8 Instrumentation calibrated; loop checks signed off.	☐	☐	☐	
B Safety systems	Yes	No	N/A	Evidence reference (record, document, date)
B1 Fire and gas detection commissioned; cause-and-effect tested end to end.	☐	☐	☐	
B2 Emergency shutdown (ESD) logic tested per the cause-and-effect matrix.	☐	☐	☐	
B3 Safety instrumented functions (SIFs) proof-tested; the safety integrity level (SIL) verification is on file.	☐	☐	☐	
B4 Fire protection systems (deluge, foam, hydrants, extinguishers) inspected and operational.	☐	☐	☐	
B5 Eyewash stations and safety showers tested and accessible.	☐	☐	☐	
B6 Portable gas detectors calibrated.	☐	☐	☐	
B7 Means of egress and assembly points clear and signposted.	☐	☐	☐	
C Safety, operating, maintenance and emergency procedures in place	Yes	No	N/A	Evidence reference (record, document, date)
C1 Safety procedures and safe work practices for the new or changed plant are written and in place.	☐	☐	☐	
C2 Operating procedures, including initial start-up, updated, reviewed and approved.	☐	☐	☐	
C3 Maintenance procedures for the new or changed equipment are written and in place.	☐	☐	☐	
C4 Emergency response procedures updated.	☐	☐	☐	
C5 Safe operating limits and the consequences of deviation documented.	☐	☐	☐	
D Process hazard analysis and recommendations	Yes	No	N/A	Evidence reference (record, document, date)
D1 A process hazard analysis (PHA) was done for the new facility or for the change, and its date and reference are written in the evidence column.	☐	☐	☐	
D2 PHA recommendations associated with the change have been addressed: each is resolved before start-up, or is an open item in section 4 with an owner, a due date and the reason it can wait.	☐	☐	☐	
D3 Recommendations from incident investigations and audits that touch this process have been reviewed for their effect on start-up.	☐	☐	☐	
E Training and personnel	Yes	No	N/A	Evidence reference (record, document, date)
E1 Operators trained on the new or modified procedures; competency verified.	☐	☐	☐	
E2 Maintenance staff trained on the new equipment.	☐	☐	☐	
E3 Contract employees doing start-up work have been told the known fire, explosion and toxic release hazards and the emergency plan, and their employer's training record is on file.	☐	☐	☐	
E4 Pre-startup briefing delivered; minutes filed.	☐	☐	☐	
E5 Shift handover covers the open items of this review.	☐	☐	☐	

F Management of change requirements met	Yes	No	N/A	Evidence reference (record, document, date)
F1 Management of change (MOC) fully closed: all action items complete, or risk-accepted with a documented basis.	☐	☐	☐	
F2 The change was approved before it was made: technical basis, effect on safety and health, time period and authorisation are on the MOC record.	☐	☐	☐	
F3 Everyone whose job is affected has been told about, and trained in, the change.	☐	☐	☐	
F4 If no MOC was raised: the work is confirmed against the design specification as a replacement in kind, by someone named in the evidence column.	☐	☐	☐	

G P&ID and documents updated	Yes	No	N/A	Evidence reference (record, document, date)
G1 P&IDs marked up to as-built and approved.	☐	☐	☐	
G2 Equipment files updated (datasheets, manufacturer data reports, mechanical integrity baselines).	☐	☐	☐	
G3 Any other process safety information the change affects (drawings, limits, relief and electrical data) updated.	☐	☐	☐	

H Pre-startup conditions	Yes	No	N/A	Evidence reference (record, document, date)
H1 Housekeeping complete; scaffolding, hoses and debris removed.	☐	☐	☐	
H2 All blinds removed per the blind list (or installed where required).	☐	☐	☐	
H3 Inerting or purging complete; oxygen level verified by gas test against the limit your procedure sets (write the limit and its source in the evidence column).	☐	☐	☐	
H4 Utilities (instrument air, nitrogen, steam, cooling water, power) confirmed available.	☐	☐	☐	
H5 Permits (hot work, confined space) closed before hazardous material is introduced.	☐	☐	☐	

4 Open items

Every **No** above, and every recommendation or action that will be finished after start-up, is written here. Form's own rule: an item that **blocks start-up** is closed, and its closure checked by someone other than its owner, before the start-up decision; an item that does not block start-up has an owner and a due date, and your own procedure says who may accept the risk of leaving it open. The form supplies no list of what blocks. For a new facility the US text says PHA recommendations are resolved or implemented before start-up; tracking one past start-up is a decision for your own procedure and the rules that apply to you, not something this form can grant.

#	Item and check number (for example D2)	Owner	Due date	Blocks start-up? (Y / N)	Risk accepted? (Y / N, by whom)	Status

5 Start-up decision

Start-up decision				
☐ Authorised ☐ Authorised with conditions (only items that do not block start-up) ☐ Not authorised				
Tally of the 40 check rows (the three must add up to 40)	Yes	No	N/A	No answers copied to section 4 (number)
Blocking items raised	Blocking items closed and closure checked	All blocking items closed? ☐ Yes ☐ No		Every check row answered? ☐ Yes ☐ No
Conditions of authorisation (each needs an owner and a due date in section 4)				
Authorised by (name, role)		Date and time authorised		Hazardous chemicals first introduced (date and time)
Independence of the authoriser ☐ Did not lead this review ☐ Did not raise the change ☐ Does not own the project schedule or cost for this start-up			If any box is not ticked: second authoriser who is independent (name, role)	

Form's own rule (not taken from a law or a standard): nobody authorises start-up while a check row is blank or a blocking item is open, and the authoriser is not the PSSR lead, not the person who raised the change and not the person who owns the schedule or cost of the start-up; if no such person is available, a second authoriser who meets this signs as well. The US standard says what the review confirms, not who authorises start-up. Your own procedure may be stricter.

6 Sign-off

Role	Name	Signature	Date
PSSR lead			
Operations lead			
Process engineer			
HSE representative			
Maintenance lead			
Site manager (final approval; the authoriser above)			

A signature says the signer checked the groups written against their name in section 2 and agrees with the answers and the open items. Keep this record, with the evidence it points to, for as long as your own procedure says.