

Gas Plant Operator interview questions

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What to expect

Interviews for gas plant operator roles are built around safety-critical decision-making as much as technical skill. Panels usually include a site supervisor or operations manager, and questions focus on how you actually behave during routine checks and during a fault, not just what you know in theory.

- **Process/technical:** Questions about how you carry out routine tasks like inspections, control panel operation and instrument monitoring.
- **Safety and compliance:** Questions testing your understanding of WHS obligations, Major Hazard Facility requirements and site safety procedures.
- **Scenario/emergency response:** Hypothetical situations testing judgement under pressure, such as alarm response or equipment failure.
- **Behavioural:** Past-experience questions about incident handling, attention to detail and working with maintenance or regulatory staff.

Most processes start with a phone or video screen covering availability for shift work and basic safety ticket checks, followed by an in-person or panel interview with an operations supervisor covering technical and scenario questions. Some employers add a site tour or control room walkthrough, and larger operators may run a final check of licences, medical fitness and site-specific competencies before an offer.

1. Walk me through how you'd conduct a pre-shift inspection and test the emergency shutdown system.

Why they ask

This checks whether you follow a consistent, safety-first routine rather than skipping steps under time pressure.

How to structure your answer

Answer as a step-by-step walkthrough: what you check first, what tools or gauges you use, how you confirm the ESD system is functioning, and what you do if something fails a check.

Example answer

"I start at the control panel, reviewing overnight alarms and any handover notes from the previous shift. Then I do a physical walk of the unit, checking pressure and temperature gauges against expected ranges and looking for leaks or unusual noise. Before startup I test the ESD panel through its diagnostic sequence to confirm it trips correctly, and I log the result. If anything doesn't respond as expected, I isolate that section, tag it out and notify the supervisor before continuing, rather than assuming it'll be fine for the shift."

2. Tell me about a time you identified an equipment anomaly before it became a bigger problem.

Why they ask

This tests attention to detail and whether you act on small signals rather than waiting for an alarm to force the issue.

How to structure your answer

Use STAR: describe the situation, what you were monitoring, the action you took, and the result for the plant or shift.

Example answer

"During a routine instrument check I noticed a compression unit's discharge pressure was drifting slightly outside its normal band, well before it would have triggered an alarm. I cross-checked it against the flow readings to rule out a sensor fault, then logged it and raised it with the shift supervisor. We scheduled a maintenance check before the next shift change, which found a valve starting to stick. Catching it early meant we could fix it during a planned window instead of an unplanned shutdown."

3. An alarm sounds indicating a pressure spike in the compression unit. What do you do?

Why they ask

Interviewers want to see calm, procedure-driven decision-making rather than guesswork under pressure.

How to structure your answer

Answer as a judgement-under-pressure sequence: immediate safety action first, then diagnosis, then communication and documentation.

Example answer

"First I'd check the control panel and confirm the reading against a second instrument to rule out a false alarm. If it's real, I'd follow the emergency procedure for that unit, which usually means isolating or reducing flow to bring pressure back into range, and I wouldn't wait to confirm with anyone before taking the immediate safety step. Once the situation is stable, I'd notify the supervisor, document what happened and what I did in the shift log, and flag it for follow-up if there's any chance it points to an equipment issue."

4. How do you keep up with WHS obligations and Major Hazard Facility requirements relevant to gas plants?

Why they ask

This probes whether you treat compliance as an ongoing responsibility rather than a box-ticking exercise done once at induction.

How to structure your answer

Answer with your general approach to staying current, then a specific example of applying a regulation or standard on the job.

Example answer

"I go through site safety bulletins and toolbox talks as they come out, and I make a point of reviewing any changes to isolation or permit procedures before my next shift on that equipment. On one site, an update to confined space entry requirements meant an extra gas test step before entry. I made sure I understood the change and applied it on my next inspection rather than relying on the old habit."

5. What experience do you have with SCADA systems and PLC-based control panels?

Why they ask

This is a direct technical check on whether your systems experience matches what the plant actually runs.

How to structure your answer

Name the specific systems you've used, describe a task you did with them, and note anything you'd need to learn on this particular site.

Example answer

"I've used SCADA screens daily to monitor flow, pressure and temperature across multiple units, and adjusted setpoints through the PLC interface when optimising throughput. I'm comfortable reading trend data to pick up early signs of drift. Every site configures its screens differently, so I'd expect a

short period getting familiar with this plant's specific layout and alarm thresholds."

6. Describe how you'd document and hand over an incident to the next shift.

Why they ask

Good handover practice affects safety and continuity, and this checks whether you communicate clearly under pressure, not just after things calm down.

How to structure your answer

Answer as a process description: what goes in the log, what you communicate verbally, and how you make sure nothing gets missed at changeover.

Example answer

"I record the incident in the shift log with the time, what happened, the action taken and the current status of the equipment, including anything still outstanding like a maintenance request. At handover I go through it verbally with the incoming operator rather than just pointing to the log, so they can ask questions and I can confirm they understand what to watch for on that unit."