

Example procedure

Cooling unit alarm and incident handling. How a control room works from a written procedure and a ticket, instead of memory.

APPLIES TO	Room cooling units (CRAHs) in the data halls, TPC (fictional campus)
USED BY	Shift technicians and the shift lead, with the cooling maintenance team
RECORDS	Monitoring system, ticketing system (incidents, work orders, problem records), shift log

PURPOSE

When a room cooling unit raises an alarm, make sure it is noticed, recorded, understood and fixed, that the right people know, and that nothing is left to memory.

BEFORE YOU START

- Follow the site's safety rules and permit-to-work system. This procedure does not authorize anyone to open, isolate or repair equipment.
- Only people trained and authorized for the equipment may work on it.

STEPS · 1 DETECT

1	Acknowledge the alarm Shift technician	Acknowledge it on the monitoring system. Acknowledging means “seen”, not “solved”.
2	Look at the whole picture Shift technician	Check the other cooling units in the same hall and the hall's environmental readings. Is this one unit, or a wider problem?
3	Log an incident Shift technician	Open an incident ticket in the ticketing system straight away, even if it looks minor. Record what the alarm says, the unit and hall, when it started and what you can see. Put the incident reference in the shift log.
4	Tell the shift lead Shift technician	Give the incident reference and a short summary: what, where, and whether anything else is affected.

STEPS · 2 ASSESS

5	Go and look Shift technician	Go to the unit with a radio. Check its local display and status lights from outside the unit. Don't open panels and don't reset anything.
6	Update the incident Shift technician	Add what you found on site to the ticket: what the unit shows locally and anything you saw, heard or smelled nearby.
7	Set the priority Shift lead	Set the incident priority using the site's priority levels: what is affected and how urgent it is. If the hall's other units are carrying the load and conditions are steady, it is a fault to fix. If conditions are changing, raise the priority and follow the escalation list.
8	Notify Shift lead	Inform the people the escalation list names for that priority, such as the operations manager. If customers could be affected, start the customer notification process and record it in the ticket.

STEPS · 3 RESPOND

9	Call in the right people Shift lead	Raise a work order for the cooling maintenance team, or call the on-call engineer. Link the work order to the incident, so the repair and the incident tell one story.
10	Keep the ticket current Everyone involved	Update the incident with every action, every finding and every handover, at the intervals the site agrees for that priority. Each update says what happened and when the next update is due. If it isn't in the ticket, it didn't happen.
11	Understand before resetting Everyone	Never reset or silence an alarm again and again to make it go away. A repeating alarm is information.

STEPS · 4 RESTORE AND CLOSE

12	Confirm recovery Shift technician	When the repair is done, confirm the unit is back in service and its alarms are clear, on the monitoring system and at the unit. Check the hall's readings have settled.
13	Resolve the incident Shift lead	Write the resolution: what happened, the cause if known, what was done and any follow-up. If customers were notified, tell them it's resolved and note that in the ticket.
14	Hand over what's still open Shift lead	If the incident or its work order is still open at the end of the shift, it goes on the handover list with its reference, status and next step.
15	Find the root cause Shift lead	If the cause is unknown or the fault has happened before, raise a problem record so engineering can find and fix the root cause. A major incident also gets a post-incident review.

EVERY INCIDENT TICKET RECORDS

- What alarmed, which unit, which hall
- Priority, and who was notified
- Linked work order and, if needed, problem record
- When it started, and who found it
- Every action, finding and handover
- Resolution, cause and follow-up

ESCALATE STRAIGHT AWAY IF

- more than one cooling unit in the same hall is in alarm
- conditions in the hall keep changing after the first checks
- there are signs of water, smoke or burning
- you are not sure what is happening

This is an illustration for The Physical Cloud. TPC is a fictional campus. Real sites write their own procedures for their own equipment, systems and people; this is not one of them and must not be used as one.