



ONBOARDING & TRAINING PROGRAM

Lab Safety

What a strong training program looks like — from a new hire's first day to a lasting culture of safety.

By Payal Sarkar, Lab Manager at San Jose-Santa Clara Regional Wastewater Facility



Why Lab Safety Training Matters

New and inconsistently-trained staff drive the majority of preventable incidents in labs.



People come first

Trained staff recognize hazards early and know how to respond, preventing exposure, injury, and near-misses before they escalate.



Regulatory compliance

OSHA's Lab Standard, institutional biosafety programs mandate documented, role-specific training.



Protects the science

Contamination, mislabeled waste, and equipment misuse compromise results as often as they cause injury. Safety protects data integrity too.

The Six Pillars of a Good Program

A strong lab safety program is structured, hazard-specific, and continuously reinforced — not a single onboarding session.



Structured onboarding

A defined path from day one to independent bench work. Reinforce PPE usage



Hazard Communication

Chemical and biological Safety. Equipment training matched to what each person actually handles.



Regular Safety meetings

Reinforce safety, celebrate a strong safety culture. Make safety approachable and fun



Accessible SOPs & SDS

Procedures and safety data sheets are current, easy to find, and written in plain language.



Scheduled refreshers

Annual renewals, plus retraining whenever a procedure, hazard, or role changes.



A reporting culture

See something, say something.. Near-misses and hazards are reported without any fear, and lessons feed back into training.

New Hire Onboarding Path

No one works independently at the bench until each stage is signed off.



General orientation

Building access, emergency exits, alarm response, incident reporting, and where to find SOPs/SDS.



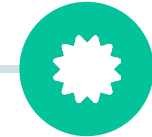
Hazard-specific training

Chemical hygiene plan, or method related safety modules matched to the person's actual work.



Supervised practice

Shadowing an experienced colleague; and use verified hands-on at the bench.



Competency sign-off

Trainer/Supervisor confirms independent, safe performance of core tasks; training record filed.

Our Training Notebook — San Jose Site

A living OneNote workspace where onboarding and ongoing training live side by side.

LABORATORY TRAINING NOTEBOOK

- Lab Onboarding Manual
- Lab Training Matrix
- Admin Information
- **Safety Program**
- Process Control (Wet Chem)
- Quality, LIMS & Client Info
- Biology
- Inorganics (Trace Metals)
- Organics
- Weekends & Holidays

HOW IT'S USED



Where onboarding starts

New hires work through the Onboarding Manual and Training Matrix before any independent bench work.



Where the Safety Program lives

Documents the Chemical Hygiene Plan, OSHA/Cal-OSHA/EPA compliance, and JHAs — the same processes covered in this training.



Where ownership is assigned

The Safety Tasks page names an owner, a backup, and a cadence for every recurring safety duty.



Kept current, not archived

Updated continuously and used as the single reference during onboarding and every refresher.

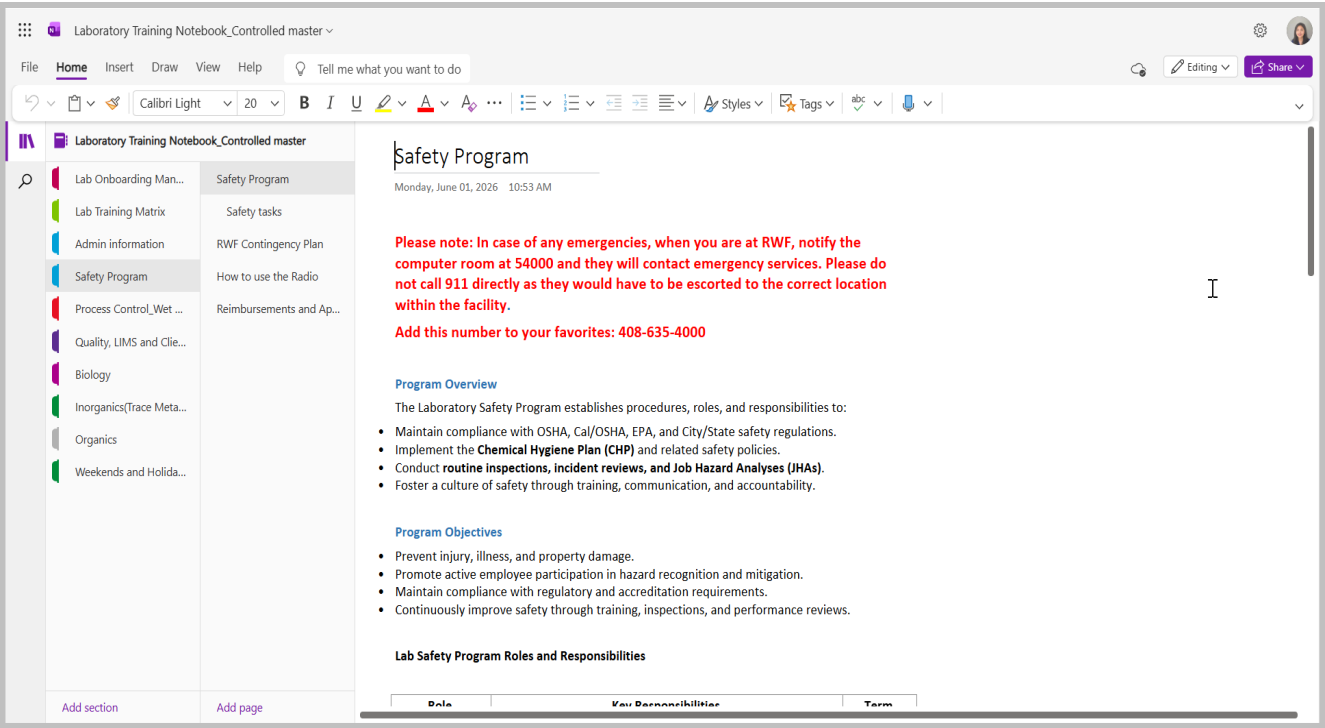
Competency Verification & Records

If it isn't documented, it didn't happen — records protect both people and the institution.



Centralized training log

One system tracks every person's modules, dates, and expiration.



Refresher Cadence

ANNUAL	General safety & hazard communication
BIANNUAL	Fire extinguisher & emergency response
ON CHANGE	New SOP, chemical, or equipment introduced
POST-INCIDENT	Targeted retraining after any near-miss

Job Hazard Analysis (JHA)

A task-specific hazard review, completed and signed before work begins on that task.

WHAT A JHA CAPTURES



Task broken into steps

The job — e.g. a chemist's TSS-Low/TSS-High testing — is split into its sequential steps.



Hazards per step

Every source of hazard in that step is identified: chemical, physical, or procedural.



Required PPE

Body, eye, hand, foot, head, hearing, fall, and respiratory protection specified up front.



Controls & recommendations

The actions that eliminate or minimize each hazard are documented next to the step.



Employee & supervisor sign-off

Both sign, confirming the hazards and controls were read and understood.

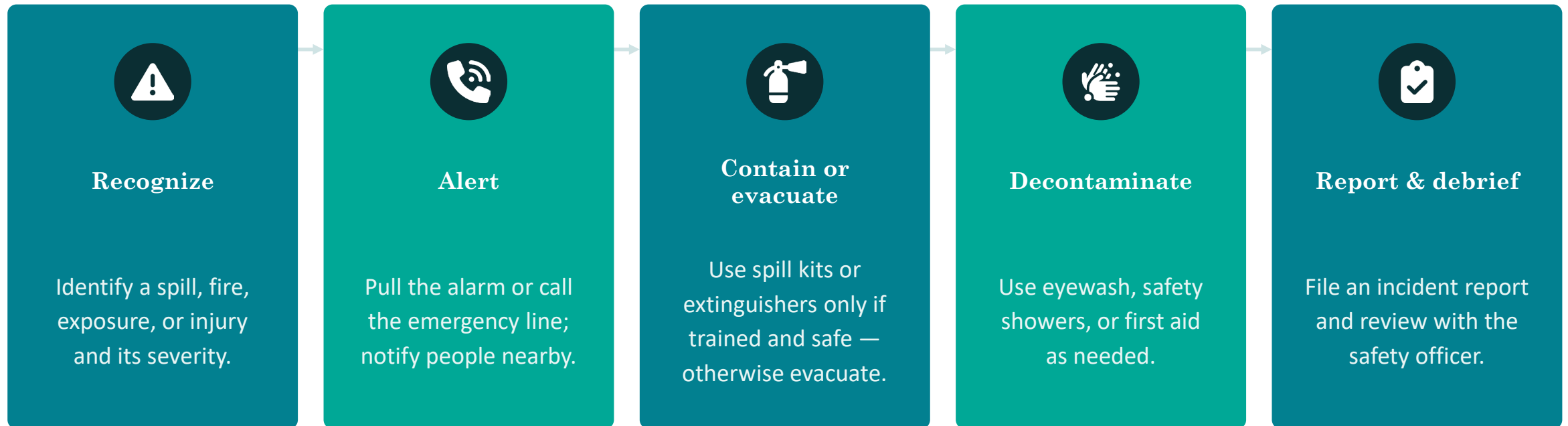


How It Helps

- Turns general training into guidance for the exact task and room
- Surfaces hazards and required controls before work starts, not after an incident
- Gives new hires a written, task-level reference on day one
- Creates a signed, auditable record of what was reviewed and understood
- Feeds directly into onboarding, PPE selection, and SOP updates

Emergency Preparedness

Every trainee can answer these five questions before their first day working alone in the lab.



Safety Program: Task Ownership

Every recurring safety duty in the notebook has a named owner, a backup, and a set cadence.

The screenshot shows a OneNote page titled "Safety tasks" within a notebook named "Laboratory Training Notebook_Controlled master". The page is dated "Saturday, June 06, 2026 10:30 PM". The table below lists various safety tasks and their ownership details.

TASK	SAFETY OFFICER	ASSOCIATE SAFETY OFFICER	WHO DOES WHAT	FREQUENCY
Monthly Lab and Plant Safety Meetings	Odd months	Even months	Picking safety video or topic	Monthly(2.5 hours)
Safety CARS/Near Misses	Lead RCA	Assist in reviewing/drafting RCA		As needed
Review Chemical Hygiene Plan annually	Primary	Back up	Both should review	Annual(1hr)
Haz waste pick up scheduling	Primary	Back up	Alternately	As needed
Annual Chemical Safety and Haz waste inventory	Chem Sheds	Chemical Stockroom	cross-review	Annual(4 hrs)
Satellite <u>haz</u> waste checks	Primary	Back up	Alternately	Weekly(1 hr)
Presence at external audits	Primary	Back up	Work together	Annual
Safety Inspection follow-ups	Primary	Back up	cross-review	As needed
Incident investigation	Y	Y	Work together	As needed
Training new employees	Primary	Back up	—	Onboarding only(1 hr)
SharePoint documentation	Monitor document upload	Back up	Review each other's work	Monthly
Emergency drills	Co-lead	Co-lead	Work together	As needed

Screenshot: Safety tasks page — Laboratory Training Notebook (OneNote)

Sustaining a Culture of Safety

Training is a cycle, not a one-time event — each loop closes the gap the last one found.



Program Health Checklist

Use this to audit an existing program, or to scope a new one.

- ✓ Written onboarding path with clear sign-off milestones
- ✓ Training assigned by actual role and hazard exposure
- ✓ Hands-on skills check by trainers
- ✓ Ensure your resources are accessible: SDSs, important forms and wellness check resources.
- ✓ Centralized log tracking every person's training status
- ✓ Refreshers scheduled by City's Safety Team
- ✓ Near-miss reporting encouraged and acted on
- ✓ Emergency contacts reviewed at least annually during contingency plan review



The takeaway

A safe lab is trained, not just told.

Structured onboarding, hazard-specific modules, hands-on verification, and regular refreshers — repeated as a cycle, not a checkbox.