

7 Signs

Your Industrial Hygiene Program May be Relying on Outdated Assumptions

Changes in production, materials, equipment, work practices and the workforce can make previous exposure data, assessments and controls less reliable over time.



Introduction

Your workplace changed. Did your exposure assumptions change with it?

Industrial hygiene programs are built on information: what employees do, which materials they handle, how long tasks take, where exposures may occur and how well controls perform.

The challenge is that this information does not remain static.

Production increases. Equipment is replaced. A temporary process change becomes routine. New materials enter the facility. Contractors hand work back to employees. Ventilation systems age. Occupational exposure limits and industry guidance evolve.

Individually, these changes may not appear significant. Together, they can create a growing gap between the workplace described in a previous exposure assessment and the workplace employees experience today.

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The following seven signs may indicate that it is time to take another look.

An older assessment is not automatically invalid. A newer assessment is not automatically complete. What matters is whether the information behind your program still represents the work being performed, the people performing it and the controls protecting them.

The key question is:

Are your current decisions about employee exposure based on current conditions, or on assumptions that have not been verified recently?

1. Production processes, equipment, work volume or staffing levels have changed

A process does not need to be completely redesigned to change employee exposure. Routine operational changes can affect how often employees perform a task, how close they are to an exposure source, how much material they handle or how long an exposure lasts.

Why This Matters

Exposure assessments are based on a specific set of workplace conditions. Increased throughput may extend task duration or generate more dust, vapor, noise or other agents. New equipment may change emission points. Reduced staffing may lead fewer employees to perform the same high-exposure work more frequently.

Added shifts may also introduce employees or work practices that were not represented in the original assessment.

What This Can Look Like

A facility increases production without changing the basic process. The existing exposure assessment is still referenced because the equipment and materials are the same.

However, employees now run longer batches, perform more changeovers and spend more time cleaning equipment. The exposure profile may have changed even though the process itself did not.

Questions to Ask

- Has throughput, batch size, operating time or shift coverage increased?
- Have tasks been automated, combined, relocated or reassigned?
- Are employees performing maintenance, cleaning or changeovers more frequently?
- Were all current shifts and employee groups represented in the previous assessment?

A Practical Next Step

Compare the operating conditions documented in your last assessment with current production data, staffing and task schedules. Identify meaningful changes before deciding whether additional observation or monitoring is needed.

2. New chemicals, materials or process aids have been introduced

New materials often receive a safety data sheet review before use. But that review alone may not show how the material affects employee exposure within your specific process.

Why This Matters

A replacement product may contain different constituents, have a different physical form or behave differently when heated, sprayed, mixed, cut or otherwise processed.

Even a material considered less hazardous can change the way exposure occurs. Powders may create airborne dust. Volatile ingredients may be released during use. A new cleaning agent may be applied more frequently or used in a less controlled location.

The material may not be the only thing that changed. The method of use may have changed too.

What This Can Look Like

A facility replaces a solvent-based product with an alternative viewed as safer. The substitution appears beneficial, but the new product is applied using a spray method rather than by hand.

The material changed, but so did the way employees may be exposed to it.

Questions to Ask

- Is EHS consistently notified before new materials are introduced?
- Are substitutions evaluated under their actual conditions of use?
- Have changes in concentration, particle size, volatility or application method been considered?
- Are maintenance, sanitation and waste-handling materials included, not just production chemicals?

A Practical Next Step

Review material additions and substitutions made since the last exposure assessment. Prioritize materials whose composition, physical properties, volume or method of use differ from what was previously evaluated.

3. Work previously performed by contractors is now being performed by employees

When work changes hands, exposure responsibilities and assumptions can change with it. A task that was once occasional or outside the scope of the employee exposure assessment may become part of employees' regular duties.

Why This Matters

Contractors may bring specialized procedures, tools, respiratory protection or training. When the task moves in-house, employees may perform it with different equipment, in a different sequence or without the same controls.

Existing exposure assessments may not include the task because it was previously outside the employee population being evaluated.

What This Can Look Like

Employees begin handling equipment cleaning that was once completed by a specialty contractor.

The work is now performed between production runs, sometimes under time pressure, using the tools and protective equipment already available onsite. The exposure potential has changed along with the people performing the work.

Questions to Ask

- Which contractor tasks have moved in-house since the last assessment?
- Were those tasks included in existing similar-exposure groups?
- Are employees using the same methods, tools and controls the contractor used?
- Have training, protective equipment and emergency procedures been reviewed for the new responsibility?

A Practical Next Step

Ask operations, maintenance and procurement to identify work that has shifted between contractors and employees. Evaluate the task as it is performed now, rather than assuming the contractor's former approach still applies.

4. The performance of ventilation and other exposure controls has not been verified recently

A control can be present, operating and still perform below its original intent. Visual appearance alone does not confirm that it is effectively capturing or reducing exposure.

Why This Matters

Local exhaust ventilation can be affected by damaged ductwork, clogged filters, altered hoods, process changes or competing airflows.

Enclosures may be left open to make work easier. Work practices may place employees outside a control's effective zone. Process modifications, equipment repositioning, or changes in airflow patterns can reduce ventilation effectiveness even when the system appears to be operating normally.

What This Can Look Like

A ventilation hood is running and employees report no obvious problem.

Over time, however, equipment has been repositioned several inches away from the hood, and portable fans have been added for comfort. Both changes may affect capture, even though the ventilation system itself was never intentionally modified.

Questions to Ask

- When was control performance last measured or observed under normal operating conditions?
- Have equipment positions, hood locations or room airflow changed?
- Are preventive maintenance and performance-verification requirements clearly assigned?
- Do employees consistently use controls during setup, cleaning, upset conditions and maintenance?

A Practical Next Step

Identify the controls considered essential to exposure management. Confirm how their performance is verified, who is responsible and what happens when performance falls outside expected parameters. Most importantly, observe the controls during real work, not only under ideal conditions.

5. Conformance with new or revised occupational exposure limits has not been evaluated

Exposure data do not change when an occupational exposure limit changes, but the conclusion drawn from those data may.

▶ Why This Matters

Organizations may consider regulatory limits, consensus standards, manufacturer guidance and internal criteria when evaluating exposure. These benchmarks can change as scientific understanding and professional practice evolve.

A result once considered acceptable may warrant another look under a different exposure limit, sampling strategy or interpretation.

▶ What This Can Look Like

Historical monitoring results were below the limit used when the sampling occurred.

A more protective occupational exposure limit is later adopted by the organization or recommended by a recognized authority. The original data may still be useful, but the earlier conclusion may no longer answer the organization's current question.

▶ Questions to Ask

- Who is responsible for tracking changes to the exposure criteria your organization uses?
- Are historical results reevaluated when a relevant limit changes?
- Does the program distinguish between regulatory requirements and other adopted guidance?
- Are internal action levels and decision-making criteria documented?

▶ A Practical Next Step

Maintain a current inventory of the substances and agents evaluated, the exposure criteria applied, and the source and date of each criterion. Flag historical conclusions that may require reinterpretation or new information.

6. Your exposure assessments have not been revisited in several years

Time alone does not make an exposure assessment obsolete. But the longer an assessment goes without review, the more opportunities there are for undocumented changes to accumulate.

Why This Matters

Small changes are often managed through separate systems: a maintenance work order, purchasing decision, staffing adjustment or production improvement.

Unless industrial hygiene is connected to those decisions, no individual change may trigger reassessment. Years later, the workplace may differ substantially from the conditions recorded in the original assessment.

What This Can Look Like

A facility has retained years of sampling data and has had no reported overexposures. However, no one has systematically confirmed whether current jobs, tasks, materials, controls and similar-exposure groups still match the assessment strategy behind those results.

The data may still be valuable, but the assumptions connecting those data to current conditions may need to be verified.

Questions to Ask

- Is there a defined review cycle for the industrial hygiene program?
- What events trigger a review between scheduled cycles?
- Do management-of-change processes consistently consider occupational exposure?
- Can the organization explain why existing data remain representative?

A Practical Next Step

Do not automatically begin by repeating every sample. Start with a structured review of what has changed.

Determine which previous assumptions remain supportable, which require verification and where new information is needed.

7. Previous exposure assessments were not well documented or may not reflect current best practices

A monitoring result without context is difficult to use. To support decisions over time, the organization needs to understand who was sampled, what work occurred, how conditions compared with normal operations and why the result was considered representative.

Why This Matters

Incomplete documentation makes it harder to group employees appropriately, compare results, interpret findings or determine whether a sample represents routine or unusual conditions. It can also lead future teams to repeat work unnecessarily or place too much confidence in data that answered a different question.

What This Can Look Like

A spreadsheet lists sample dates, employee names and results, but it does not describe the tasks performed, production rates, control status or rationale for selecting those employees.

The numbers are available, but the organization cannot confidently determine what they represent today.

Questions to Ask

- Is the rationale for each similar-exposure group documented?
- Do records describe tasks, duration, operating conditions and controls?
- Can reviewers trace conclusions back to observations and data?
- Are limitations, uncertainties and recommendations clearly recorded?
- Would a new EHS leader understand why the organization considers the exposure characterized?

A Practical Next Step

Review a representative sample of assessment records for completeness and decision-making logic. Strengthen documentation standards before the next round of monitoring so new information remains useful over time.

Do not start by sampling everything

Identifying one or more of these signs does not necessarily mean your entire industrial hygiene program must be rebuilt.

It means the assumptions supporting the program deserve a closer look. The most useful first step is often to establish what changed, which employee groups may be affected and where existing information is no longer sufficient to support a sound decision.

A focused review can follow four steps:

1

COMPARE

Compare current operations, materials, staffing, tasks and controls with the conditions documented in previous assessments.

2

PRIORITIZE

Focus first on changes with the greatest potential to affect exposure severity, exposure frequency or the number of employees involved.

3

VERIFY

Use workplace observations, record reviews, employee input and control checks to determine whether key assumptions remain accurate.

4

FILL THE GAPS

Conduct additional qualitative or quantitative assessment where existing information cannot support a current conclusion.

▶ **The goal is not simply to collect more data.
It is to make better decisions.**

An effective industrial hygiene program connects current workplace conditions with the information needed to evaluate risk, confirm controls and protect employees. Monitoring is one tool within that process, not the entire process.

When should you take another look?

Use the following questions to support discussions with EHS, operations, engineering, maintenance, human resources and procurement.

A “yes” or “not sure” response may indicate that additional review is warranted.

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Has production volume, batch size, operating time or shift structure changed?

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Has equipment, process layout or task location changed?

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Have jobs been combined, reassigned or performed with fewer employees?

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Have new chemicals, raw materials, cleaning products or process aids been introduced?

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Has a material's supplier, formulation, concentration or physical form changed?

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Are employees performing work previously completed by contractors?

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Has ventilation or another critical control gone without a recent performance check?

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Have employees modified, bypassed or stopped using a control?

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Has a relevant occupational exposure limit or internal criterion changed?

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Have several years passed without a structured program review?

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Do management-of-change reviews fail to consider employee exposure?

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Do historical records fail to explain the tasks, conditions and conclusions?

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Have employee concerns, symptoms or workplace observations suggested that conditions may differ from expectations?

Make sure today's decisions reflect today's workplace

Industrial hygiene programs are most valuable when they evolve with the organization.

A focused review can help determine whether existing exposure data, assessments and controls still support current decisions and where attention should be directed first.

▶ DEKRA can help your organization:

- Determine whether previous assessments still represent current conditions
- Identify employee groups, tasks or materials that may require additional evaluation
- Review the effectiveness and verification of exposure controls
- Evaluate the strength of existing exposure information
- Strengthen assessment documentation and program decision-making
- Prioritize resources based on the most meaningful potential gaps
- Develop practical next steps based on your operations and workforce

▶ Have your operations changed since your last exposure assessment?

Talk with a DEKRA Industrial Hygiene expert to determine whether your exposure data, controls and assumptions still reflect today's workplace.

Talk With an Industrial
Hygiene Specialist

