

You Passed the Audit. So Why Are You Still at Risk?

Plant operators are getting better at compliance. So why do process safety incidents keep happening?

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Over six days in May 2026, Garden Grove, California was on the brink of disaster. A 34,000 gallon tank containing the toxic and highly flammable liquid methyl methacrylate (MMA) was close to exploding due to overheating. More than 50,000 residents were forced to evacuate and, months later, $100 million in claims were filed.[1]

According to the local fire chief, the incident was unprecedented with no easy resolution. Emergency responders braced for the tank to either spill or explode, two scenarios poised to have devastating consequences for the immediate community.

Luckily, neither happened. Yet despite the crisis, and the millions of dollars required for cleanup, it was determined that plant operator GKN Aerospace, which makes cockpit windows and shields for military aircraft, had met the requirements of a lower-tier chemical inventory filing because MMA did not appear on federal or state lists of chemicals subject to the toughest accidental-release prevention rules. At the time of this writing, the Orange County DA has closed its criminal investigation without charges but is pursuing a civil resolution that includes a claims program of up to $100 million and a court-approved, independently monitored safety plan.

A Compliance Disconnect

Chemical Industry operators have spent decades getting better at compliance. For example, according to the American Chemistry Council (ACC), between 2017 and 2025, ACC members reduced their Tier 1 process safety events by 24% by implementing a commitment to set process safety expectations, define accountability, and allocate resources to achieve performance expectations.[2]

Yet despite those efforts, major incidents keep happening. **Between 2021 and 2025, reportable events increased roughly 60%, with events involving a serious injury or fatality likewise rising about 52%,** according to the Chemical Safety Board.[3]

The GKN Aerospace incident shows a greater, and disturbing, trend. In another example, a massive explosion at the Nippon Dynawave Packaging plant in May 2026 led to multiple fatalities and extensive structural destruction in Washington.[4] In Georgia, the US Chemical Safety Board reported that a corroded sprinkler system was at fault for triggering a toxic gas plume and mass evacuations at BioLab, a chemical manufacturing facility.[5] And in North Carolina, a plastics and chemical recycling plant shuttered after the state discovered years of mishandling hazardous waste and potential benzene contamination.[6]

Safety Compliance is not Risk Reduction

Compliance to a minimum set of requirements is not the same as risk reduction. Even with rigorous safety systems in place, organizations often lack continuous visibility into operational risk across those systems. Worse, many do not review that risk routinely, and that is where disaster becomes possible. Worker and community safety are both vulnerable as a result.

Think of compliance this way: to get behind the wheel of our car, we are expected to comply with regulations, such as pass a driver's exam to earn our license, submit our vehicle for inspection, and meet basic insurance requirements for that vehicle.

Yet none of those things fully insulate us from risk. Even though we followed every regulation, we may drive while tired, get temporarily blinded by the sun, or let passengers, our phone, or any number of factors distract us. Just because we are technically compliant, does not mean that all the risks of operating a motor vehicle have been mitigated.

Four Reasons Why Compliant Organizations End Up in Crisis

Compliant organizations put themselves at high risk due to four key reasons.

An operating culture that favors compliance over risk reduction. Organizations track hundreds of metrics, complete their audits, and close their action items, yet still miss the handful of degraded safeguards that could produce catastrophic loss. Passing an audit and managing risk are not the same, and treating them as interchangeable is exactly how a site ends up compliant on paper and in crisis in practice.

Point-in-time assessment replacing continuous Validation & Verification (V&V). A risk review captures a moment. But degradation doesn't happen in moments. It accumulates across the gap between reviews, in the seized valve, the deferred maintenance ticket, and the permit application still sitting with the regulator. Operating risk accumulates the same way organizationally, both quietly and continuously, during the time that a point-in-time review isn't watching. Static reviews are not built to catch that kind of slow accumulation.

Fragmented risk profiles create operating risk blind spots. When a site's risk profile is mixed — mostly routine, with localized pockets of significant hazards — organizations can lose focus, or apply wrong risk principles to wrong parts of the operation. A uniform review process misses a non-uniform risk profile.

Barriers and mitigation plans are not continuously reviewed and updated. Risk mitigation is not simply a desktop exercise that gets documented and sits on a shelf until the next hazard review. It's an operating discipline that has to hold up in the ordinary hours between incidents, not just on the day of the audit. Often, sites are not unaware of their risks, and often have in place documented barriers and mitigation processes. The gap is not knowledge — it is whether systems are actually maintained and, when called upon, are operating as designed every shift. When this doesn't happen, disaster can strike.



What Successful Companies Do to Avert the Next Crisis

Companies that avoid crises go beyond checklist compliance. They embed their operating risk management processes with strict discipline on actively managing that risk. These organizations foster an overall safety culture that is vigilant throughout every level of the organization. Here's what else these companies do compared to others that fail to go beyond routine compliance.

- **They build a management system to close the loop on identified risks.** Identifying a risk is not the same as managing it. A real management system ensures that once a risk is surfaced, someone owns it, tracks it, and follows through so it is thoroughly remedied.
- **They treat critical assets differently.** Not every asset at a facility carries the same consequence if it fails. Organizations that get this right formally identify their critical assets — those tied to catastrophic-consequence scenarios — and hold them to a different standard: more diligent preventive maintenance tracking, and severity/consequence weighting built directly into the site risk assessment, not bolted on afterward.
- **They validate risk potential against their own history, not just current-state checklists.** Historical process data — near misses, prior deviations, maintenance trends — gets applied to current hazard assessments to verify and validate, not just to file paperwork.
- **They treat risk as a board-level issue.** The right question for a board isn't "are we in compliance?" Rather, it is "what do our KPIs actually tell us about risk trajectory, and what assurances do we have that those risks are being actively managed every day?"
- **They train their frontline leaders to become more deeply engaged in discussing risk.** Site managers discuss risk with their operations teams on a day-to-day basis as opposed to reporting monthly in an operating review. They test, verify, report, and discuss risks as part of their daily cadence, and always focus on "what if" scenarios.
- **They move from fragmentedinsight to holistic visibility.** Almost every site can perform a risk assessment. What sets prepared sites apart is thoroughness and the ability to connect signals scattered across siloed systems: preventive maintenance records, permit status, inspection history, and incident data. Viewed separately, these signals rarely raise alarms. Viewed together, they reveal risk that would otherwise go unseen.



The Power of Digital Enablement: Connecting Signals to Better Evaluate Risk

Digital enablement can unite data in one place, so operators have full visibility into the signals that transmit potential risk.

dss+360, for example, is a digital enablement platform that connects the weak links across operational risk data that most organizations can't otherwise see together: preventive maintenance records, operating incidents, inspection and compliance history, and more. Operators gain clarity from complexity as dss+360 consolidates systems, culture, and leadership data to reveal hidden patterns and benchmarking performance across sites. dss+360 gives site operators the ability to step back and reconsider what data sources it should even be looking at, and where risk is concentrating before it becomes an incident report.

dss+360 makes an assessment more effective by automating and unifying data that normally sits in silos and is nearly impossible to connect manually. Unlike other benchmarking tools, dss+360 connects cultural insight with operational data, revealing how leadership, engagement, and behavior shape real risk exposure. Digital enablement platforms like dss+360 can be a force multiplier when combined with deep expertise — not a substitute for it.

More visibility doesn't mean less work for operators - it means more responsibility. Every new risk signal has to be evaluated with greater diligence, not less. Data doesn't replace critical thinking. It sharpens it.

Questions Plant Operators Should Ask to Better Control Operational Risk

Leaders overseeing complex and hazardous operations recognize the value of asking targeted questions that surface potential gaps and opportunities to further reduce risk, including:

- How are our controls and barrier systems verified?
- How are we talking about the biggest risks with our team?
- How are we using AI tools to explore new risk scenarios?
- Do we know our critical assets, and are they managed differently than routine ones?
- Where is our data fragmented, and what weak signals might we be failing to connect as a result?



The Next Crisis Is Already Visible — But Only if You're Looking

Incidents like what happened at GKN Aerospace are avoidable. It shows what happens when signals are missed, ignored, or never connected — and a mindset that mistakes passing an audit for reducing risk.

Adopting a deeper operational risk mindset requires several shifts. Sites must maintain critical assets to a higher standard and validate data against their own history rather than state checklists. Site managers need training to test, verify, report, and discuss risk as part of their daily routine. Most importantly, sites must go beyond identifying risks to actively managing them until they are resolved.

Dismantling data siloes can help in this transformation. With greater visibility into all the factors that can affect risk, site managers will get a risk management visibility that is more robust and in real time. Digital enablement platforms like dss+360 provide a connected view of risk, enabling more informed decisions while increasing the return on existing digital and technology investments.

The organizations that avoid the next crisis won't be the ones with the most policies. They'll be the ones with the clearest, most connected view of where their risk actually lives — and the discipline to act on it every day, not just on review day.

1 https://abcnews.com/US/evacuation-orders-issued-california-city-chemical-tank-fails/story?id=133234846

https://www.cbsnews.com/losangeles/video/gkn-aerospace-establishes-100-million-damages-claim-program-over-chemical-tank-crisis/

2 https://www.americanchemistry.com/driving-safety-sustainability/responsible-care-driving-safety-sustainability/chemical-industry-transparency-performance-reporting/safe-processes-operations___

3 https://www.pcimag.com/articles/114839-reported-chemical-accidents-rise-60-in-federal-data

4 https://abcnews.com/US/cause-death-released-11-victims-washington-chemical-tank/story?id=133798414

5 https://www.yahoo.com/news/us/articles/corroded-sprinkler-heads-triggered-catastrophic-104631185.html

6 https://insideclimatenews.org/news/10072026/nc-plastic-recycling-plant-shutters-after-mishandling-hazardous-waste/

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About dss+

dss+ is the operational transformation partner for complex and high-hazard industries. Driven by our purpose, we help organisations achieve breakthroughs in safety, performance and sustainability that build business endurance and ensure long-term success. We engage deeply within organisations to empower teams to shift mindsets, shape cultures, and establish the capabilities required at every level. We combine technical expertise and operational experience with a people-centred approach and data-driven insights. Additional information is available at www.consultdss.com.

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