Pool Chemicals Forum

Chemical Incident Report

2025

THE POOL CHEMICAL FORUM (PCF)
CHEMICAL INCIDENT REPORT 2025

Pool Chemical Incident Report Introduction

In recent years, chemical incidents in the pool industry have risen significantly, highlighting the need for greater understanding, prevention, and reporting. The Pool Chemical Incident Form was created to help document the causes, effects, and—most importantly—the learnings from such incidents.

This open survey invites submissions from across the industry and is summarised in an annual report aimed at operators of recreational water facilities. The goal is to promote transparency and shared learning to improve safety and standards in chemical handling and use.

The Pool Chemical Incident Form can be accessed via the following QR code or the link below:

https://uk.surveymonkey.com/r/GZDWFS8

Pool Chemical Forum Introduction

To support this initiative and tackle the wider challenges posed by chemical incidents, the Pool Chemical Forum was established. The Forum brings together key stakeholders to drive improvements in industry practices, raise awareness, and foster collaboration across organisations.
Its core aims include enhancing standards for chemical handling, encouraging consistent incident reporting, and sharing insights to prevent recurrence.

The membership of the Pool Chemical Forum comprises representatives of the following organisations:

- BISHTA
- Brenntag
- The Chemical Business Association
- CIMSPA
- STA
- IOS
- ISPE
- PWTAG
- RLSS UK
- SPATA
- UK Active

Reporting Period: Incident Form release (March 2024) – December 2024

This document summarises chemical-related incidents recorded in the incident register during the reporting period. All information has been anonymised to maintain confidentiality while providing a clear overview of the incidents, trends, and corrective actions taken.

Documenting incident details plays a key role in improving safety standards across the industry. By systematically recording incidents and sharing anonymised reports, organisations can identify common causes, contributing factors, and areas that need targeted improvements. This process helps raise awareness, mitigate risks, and prevent similar incidents from happening again.

Retrospective reporting also provides key information and insight into the improvement of chemical handling safety, hence the inclusion of incident details from 2019 onwards.

Sharing the corrective actions taken after an incident enables companies across the sector to learn from each other's experiences. This collaborative approach not only helps individual organisations manage chemicals more effectively but also promotes industry-wide best practices that protect employees and the public. Through better communication and transparency in incident reporting, the Pool Chemical Forum (PCF) continues to support safety improvements, compliance, and a culture of ongoing progress within the industry.

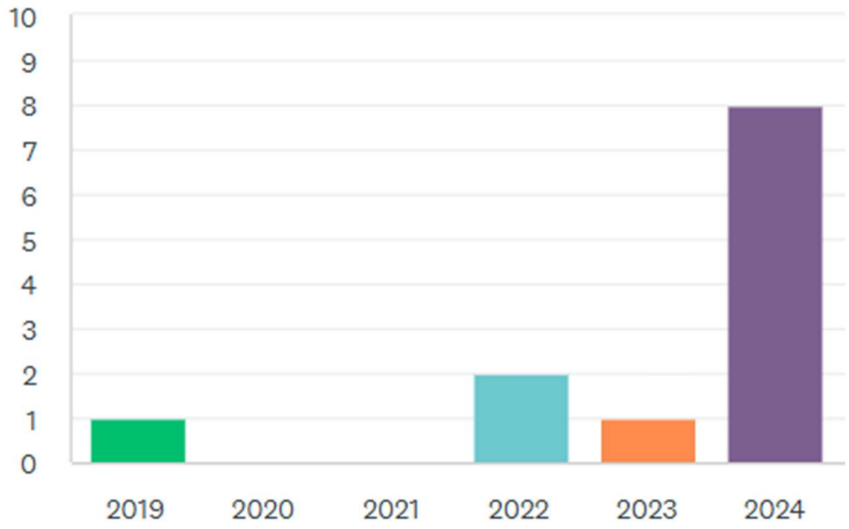

Figure 1 - a graph to show the year of incident occurrence from the 12 reported incidents.

Insight Summary

The following insights have been extracted from 12 incident response reports.

Pool facility type

All 12 responses have come from commercial facilities, with 4 of these facilities stating their main business is water-related activities whose use is public. 5 stated they are from facilities where a pool is an additional service, such as a hotel.

Incident information

The dates of the incidents (**not** when the incident was logged) range from 2019 to 2024. There is no apparent geographical correlation regarding incident frequency.

Of the listed incidents, 33% of listings concerned a chemical spill, 22% from accidental mixing due to burst dosing lines, and 11% each from a day tank top-up and injector cleaning. 2 incidents fell into the *other* category, concerning an incorrect line change over, and another listing fumes on the poolside.

Within the responses, 80% of incidents took place within the plant room, with the rest happening poolside. Despite this, in 40% of cases, multiple rooms or entire buildings were affected.

In terms of the chemicals involved, 50% of incidents reported incidents involving pH decreasers (2 with hydrochloric acid and 3 with sodium bisulphate), with the remaining cases involving disinfectants (calcium hypochlorite and sodium hypochlorite).

No responses reported any harm to employees or customers.

Of the 12 reports, 6 stated that the pool had an emergency action plan (EAP) which included information on a chemical spill. 1 stated a lack of EAP entirely, with 3 reports not providing an answer. 2 reported that staff had not been trained to respond to chemical incidents.

Despite 6 companies stating that personal protective equipment was made available, only half of those utilised it at the time of the incident.

Corrective actions

Two respondents detailed any corrective actions because of the incidents. It is important to remember the confidentiality of submissions, meaning operators filling out the register might not be responsible for corrective actions, or able to outline them due to commercial confidentiality.

The two respondents stated:

“More training being given, watching what happened back on CCTV to include the clean up to see where it went wrong. Full report complete, Snr managers discussed and plan of action put in place. Updated systems of work to be clearer.”

“More regular checks on the condition of the dosing line and additional support added to injector and nearby dosing line.”

These provide useful direction for pool operators as a means of learning from other facilities’ mistakes before they occur their own.

Of the remaining reports, one stated that corrections were “currently under review”, with the rest of the respondents either stating that they weren’t aware of any, that there had not been any at all, or skipped the question entirely. It is worth noting that the limited number of reported corrective actions may reflect several factors. In many cases, the individuals completing the register may not have been directly responsible for implementing or overseeing corrective actions, and thus such details may fall outside their scope of knowledge. Additionally, some reports may have been submitted retrospectively, without the benefit of follow-up information. Others may have been filed before any investigation had been concluded or corrective steps had been finalized, further limiting the ability to report this information accurately.

The Importance of Improvement Actions and Report Transparency

Outlined under ISO 9001, and summarised by JR Consultants, the implementation of corrective and preventative actions are key to improvements in site safety management.

Implementing Corrective and Preventive Action

Here is an example of what steps can be taken in the approach to corrective and preventative action:

1. Identify the problem with the process – Clearly and thoroughly define the problem.
2. Ascertain the size of the problem – To what extent, how far reaching, what will be affected by the problem?
3. Take necessary action to contain the problem – How can you stop the problem from worsening whilst you work on fixing the root cause?
4. Pinpoint the root cause of the issue – What is at the centre of the problem below the surface manifestation?
5. Create a plan to resolve the root cause – What needs to be done to eliminate, fix or remove the root cause? Ensure that the plan will not cause further complications.
6. Put the plan in place – Carry out the necessary actions of your plan.

Carry out necessary checks, tests and reviews to see if it worked – Make sure that the plan was effective.

- JR Consultants, "ISO 9001 Corrective Action vs Preventive Action"

Conclusion

This report summarised 12 chemical incident reports submitted from March to December 2024 across commercial pool facilities. Retrospective incidents dating back to 2019 were also included to widen the scope of learning. This is to be expected in future operation of the register. Key findings include 33% of incidents involving chemical spills and 50% related to pH decreasers. Most incidents occurred in plant rooms, with limited use of personal protective equipment and emergency action plans. Most importantly however, a lack of reported corrective actions is concerning, as it suggests missed opportunities to address root causes, improve safety protocols, and prevent similar incidents in the future.