

RISK AND RELIABILITY

MAJOR INCIDENT RESPONSE SERVICES



Incidents involving significant releases of hazardous materials, fires or explosions can result in loss of life, damage to the facility, business interruption and regulatory agency investigations. Response to a significant incident can put a severe strain on the resources of an organization. Understanding the causes, interfacing with third parties (OSHA, EPA, CSB, clients, attorneys), and resuming operations are key reasons clients call on ABS Group for support following an incident.

Services

ABS Group assists companies and their legal representatives in the aftermath of a major incident with the following goals:

- · Understanding the incident and targeting root causes to prevent similar events
- Navigating regulatory requirements
- Assisting with the facility's return to operation

Our services include:

| Site Support | Investigation Activities | Follow-up Services |
|---|--|---|
| Site Control Agreement Preparation Evidence identification and preservation Interaction with regulatory agencies Protocol development Start-up safety evaluation Field support personnel | Root Cause Analysis (RCA) Fire and Explosion Investigation (FEI) Facility Process Safety Management evaluation Policies and procedure assessment Human Factors Assessment Mechanical Integrity Assessment | Safety, Risk and Integrity Management training Safety Culture appraisal and improvements Recommendations implementation Inspections to prevent future incidents Expert witness assessment |

To help clients respond and recover from major incidents, we provide:

Site Support

Secure and control the incident scene – Securing the incident scene preserves evidence and protects personnel from hazards. ABS Group can assist in several areas such as defining hazards and their extent, then planning for mitigation and developing site control agreements and protocols to quickly secure and control the incident scene.

Identify, preserve and collect evidence – As the investigation progresses, evidence is identified and needs to be properly documented, collected and stored. Our Root Cause Analysis Handbook devotes an entire chapter to evidence gathering and preservation. ABS Group has provided staff to document any inspections of evidence in the field, help plan how evidence will be removed, document removal of evidence, and to serve as custodian of the evidence once collected.

Interface with regulatory agencies – Each agency has its own authority, direction and protocols. We have direct experience with OSHA, CSB, EPA, Department of Homeland Security, US Coast Guard and others. We can guide you through the inspection process by providing initial forms and procedures and negotiating protocols for the investigation.

Investigation Activities

Perform a RCA – Prior to restarting after an incident, a thorough investigation of the root causes is needed to make sure the event is unlikely to reoccur. The ABS Group SOURCE™ uses state-of-the-art techniques to perform a RCA and help you understand what caused an incident, prevent recurrence and promptly restore the confidence of workers, management, regulators and the public. We facilitate the investigation by: (1) collecting, organizing and analyzing data, (2) identifying root causes, (3) developing recommendations and (4) maintaining consistency and organization within the team throughout the analysis process.

Conduct Fire and Explosion Investigation (FEI) -

Analysis defines point(s) of release, ignition sources, extent of flammable cloud, fire patterns/thermal exposures, explosion energy and blast contours, with the results helping distinguish between the origin and knock-on events. FEI modeling supports the investigation and may include dispersion, fire, explosion and structural modeling, and in some cases computational fluid dynamic and finite element modeling. The analysis methods can determine (or exclude) potential initiating events, the sequence of follow-on events and the event timeline. The analysis results are often used to reject false claims and to design adequate structures for future application.

Other Technical Analysis

Some incidents require additional technical analyses such as human factors assessments, mechanical integrity assessments, and process safety management program analyses. ABS Group has experts available in all these areas and many more to help improve the standard of your investigation.

Follow Up Services

Recommendation Implementation – Once the investigation is done, we can assist in tracking, implementing and assessing the effectiveness of the recommendations through inspections, process improvements and training.

Offer expert witness assistance – Regulatory citations and civil litigation are often an outcome of major incidents. To defend against potential allegations made against a company, ABS Group provides recognized technical experts with the experience and gravitas to develop specialized arguments and serve as expert witnesses.

We provide a 24-hour hotline for incident investigation services. Call +1 331-303-2272 to speak directly to a lead investigator.



