



Business in a New Age

# Managing operational risk amid disruption:

NGC partners on Process Safety monograph with the Centre for Chemical Process Safety (CCPS)







Managing operational risk amid disruption... | CONTINUED



*Risk management is critical to ensuring employee safety*

Across all economic sectors and species of industry, one major principle has connected businesses in the reign of COVID-19 – regard for the health and safety of people. Various precautions are being taken to reduce employee and stakeholder exposure and the risk of contagion.

For essential workers on the frontlines of the energy sector and industries handling hazardous materials, safety must be approached from two directions. On the one hand, the threat to health and life on account of COVID-19 must be addressed with proper protective gear and operational protocols. On the other hand, companies must ensure through management of organisational change (MOOC) that new manning configurations, procedural changes and unavailability of key resources during this period do not introduce further and more immediate risks to employees and process safety assurance. In this context, Risk-Based Process Safety Management (RBPSM) becomes especially critical.

In the usual course of operations, RBPS guidelines are used by energy and chemical companies to manage and mitigate the risk of process safety incidents due to failures of technology, human errors, weaknesses in

management systems, external circumstances or natural events. With COVID-19 disrupting routines, reducing manpower and forcing companies to manoeuvre in a restricted operating environment, risk management must now factor in a host of new conditions and constraints.




Recognising the importance of sustaining the energy sector and the need for process safety measures that respond specifically to the new COVID-impacted reality, NGC's Vice President of Operations, Ramesh Harrylal, proposed that the Company partner with the Centre for Chemical Process Safety (CCPS) to produce response guidelines and insights that can help companies across the world manage new risks and continue operating safely.

This proposal was met with the full support of the CCPS. In April 2020, Mr. Harrylal and Dr. Anil Gokhale – Director, CCPS Projects – mobilised a team of CCPS and international contributors. Within one week, they collaborated to produce and disseminate a monograph entitled 'Risk-Based Process Safety During Disruptive Times' for use by industry professionals worldwide.



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Table 1: Summary of RBPS insights for disruptive times<sup>1</sup>

Pillar	Element	Synopsis of recommended actions
<b>Commit to Process Safety</b>  	<b>Process Safety Culture</b>	<ul style="list-style-type: none"> <li>• Lead the crisis response</li> <li>• Communicate often</li> <li>• Compensate for impacts on human performance</li> <li>• Build trust</li> <li>• Maintain a sense of vulnerability amid the crisis</li> </ul>
	<b>Compliance with Standards</b>	<ul style="list-style-type: none"> <li>• Manage deferrals</li> <li>• Continue to follow standards</li> </ul>
	<b>Process Safety Competency</b>	<ul style="list-style-type: none"> <li>• Optimise online training</li> <li>• Consider on-the-job learning opportunities</li> <li>• Identify key resources</li> </ul>
	<b>Workforce Involvement</b>	<ul style="list-style-type: none"> <li>• Engage creatively</li> <li>• Minimise paper documentation</li> </ul>
	<b>Stakeholder Outreach</b>	<ul style="list-style-type: none"> <li>• Communicate</li> <li>• Recognise support functions</li> </ul>
<b>Understand Hazards and Risk</b>  	Process Knowledge Management	<ul style="list-style-type: none"> <li>• Make information accessible</li> </ul>
	Hazard Identification and Risk Analysis (HIRA)	<ul style="list-style-type: none"> <li>• Be flexible with HIRA</li> <li>• Maintain control of risk decisions</li> <li>• Evaluate effect of reduced staffing</li> <li>• Manage increased cybersecurity risks</li> </ul>
<b>Manage Risk</b>  	<b>Operating procedures</b>	<ul style="list-style-type: none"> <li>• Maintain procedures</li> </ul>
	<b>Safe Work Practices</b>	<ul style="list-style-type: none"> <li>• Actively manage maintenance work</li> <li>• Address new safety concerns</li> <li>• Ensure smart devices are safe to use</li> </ul>
	<b>Asset Integrity and Reliability</b>	<ul style="list-style-type: none"> <li>• Use risk-based assessment</li> <li>• Continue inspection, testing and preventative maintenance</li> </ul>
	<b>Contractor Management</b>	<ul style="list-style-type: none"> <li>• Collaborate with contractors and integrate response plans</li> </ul>
	<b>Training and Performance Assurance</b>	<ul style="list-style-type: none"> <li>• Continue basic safety training</li> </ul>
	<b>Management of Change</b>	<ul style="list-style-type: none"> <li>• Continue to manage change</li> <li>• Recognise organisational change is key</li> <li>• Anticipate organisational change</li> </ul>
	<b>Operational Readiness</b>	<ul style="list-style-type: none"> <li>• Make sure you are ready to operate</li> </ul>
	<b>Conduct of Operations</b>	<ul style="list-style-type: none"> <li>• Maintain a sense of vulnerability</li> <li>• Manage fatigue</li> <li>• Focus on specific operational communications</li> </ul>
	<b>Emergency Management</b>	<ul style="list-style-type: none"> <li>• Enact crisis management plans</li> <li>• Maintain emergency response capability</li> </ul>
	<b>Incident Investigation</b>	<ul style="list-style-type: none"> <li>• Continue learning from incidents</li> <li>• Conduct learning reviews</li> </ul>
<b>Learn from Experience</b>  	<b>Measurement and Metrics</b>	<ul style="list-style-type: none"> <li>• Consider metrics specific to the crisis</li> </ul>
	<b>Auditing</b>	<ul style="list-style-type: none"> <li>• Review audit schedule</li> <li>• Consider remote audit capabilities</li> </ul>
	<b>Management Review and Continuous Improvement</b>	<ul style="list-style-type: none"> <li>• Engage management</li> </ul>

<sup>1</sup> <https://www.aiche.org/sites/default/files/html/544906/RBPS-during-COVID-19-and-Similar-Disruptive-times.html>



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### RBPS During Disruptive Times

The COVID-19 crisis has presented several challenges to operations and process safety managers. Global shutdowns and border closures have interrupted supply chains, forced persons indoors and limited the availability of key subject matter experts and resources. Production has slowed and businesses are losing money. Frontline workers who are required to physically report for duty are grappling with novel anxieties, pressures and adjustment to new ways of working.

What this means is that existing risks must now be re-evaluated, and new emerging risks assessed and managed with capital and human resource limitations. Companies may have less access to money for PSM; tools and materials to execute preventative maintenance work may be unavailable; personnel may be forced to isolate at home, reducing employee numbers and increasing the burden of work on a few; heightened stress levels may increase the likelihood of human error.

The new CCPS monograph considers all these factors and proposes specific actions that can help companies mitigate the associated risks during this and similar crises. It is built around the Pillars and Elements of CCPS' original RBPS guidelines and includes insights from the experiences of several contributing companies, including NGC.

### Applying RBPSM today

At NGC, and among the wider NGC Group of Companies, these guidelines have been used to ensure business continuity and operational safety amid current challenges. For example:

- Work from home measures have been enforced with employee safety at the forefront;
- Core staff have been rostered and work on a shift basis to reduce field exposure and risk of burnout;
- Work programmes have been prioritised so that critical maintenance work continues while non-critical work has been deferred;
- COVID-specific personal protective equipment has been procured and deployed to field crews;
- Risks assessments are being conducted on deferred activities with identified response actions to manage the changing risks;
- Real-time co-ordination with upstream, midstream and downstream companies, the Trinidad and Tobago Emergency Mutual Aid Scheme (TTEMAS) and Point Lisas Energy Association (PLEA) CEOs was established;

- Communication around risks and new developments is constant and comprehensive, both internally and between NGC and other stakeholders in the sector, so that collective informed decisions can be made.

### Collaborating for global process safety assurance

To the credit of the task force behind its publication, the CCPS monograph is now a foundational resource for times of crisis. It was created by a sub-committee of CCPS members. In addition to Mr. Harrylal and Dr. Gokhale, it included Mr. Jerry Forest of Celanese; Mr. Elliot Wolf of Chemours; Ms. Jennifer Bitz of the CCPS; and Ms. Cheryl Grounds of the CCPS. The monograph is now published in four (4) languages (English, Chinese, Spanish and Portuguese) as part of the international outreach to share these guidelines and insights.

Commenting on the genesis and importance of this project, Mr. Harrylal noted:

"Process safety assurance is critical for all companies involved in managing highly hazardous facilities. It was recognised early by NGC that COVID-19 could have an impact on process safety and all energy sector stakeholders during this global pandemic, as changes are being made to resourcing strategies and operations. NGC, therefore, saw an opportunity for knowledge-sharing and collaboration in this critical area. We are happy to have been able to contribute in a meaningful way and help companies around the world operate safely in times of challenge."

For NGC, the seminal role of Mr. Harrylal in the production of this document, and the support received from Senior Managers (HSSE – Mr. Himalaya Boodoosingh; Projects – Mr. Winston Mohammed; and Treasury and Risk – Mr. Ricardo Lewis), reflect the capacity of the Company to shape thought and practice at the level of the international industry. It is indicative of the initiative, collaborative spirit and expertise resident in the Company. Importantly, it is also an achievement that moves the Company further along on its journey to become a global leader in energy.

To read the full monograph, visit: <https://www.aiche.org/sites/default/files/html/544906/RBPS-during-COVID-19-and-Similar-Disruptive-times.html> ■