



Managing Process Safety during the COVID-19 Pandemic - Regulators

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Background

This paper outlines a collection of approaches that regulators from a number of jurisdictions are following to help organisations and inspectors manage process safety during the COVID-19 pandemic. It has been drafted following feedback from a number of different ISC supporting partners and regulators. It is not extensive but provides some useful information across a range of aspects.

This document can be studied back to back with the ISC paper on Managing Process Safety during the COVID-19 Pandemic, published in May 2020. That paper outlined a collection of various good practices and pitfalls to avoid and to help organisations manage during the COVID-19 pandemic.

The COVID-19 pandemic has created unprecedented challenges for not only industrial sites but regulators and has required consideration of new and different ways of working to ensure that major incident risks at various industrial facilities are well managed. The following sections outline the measures taken since March 2020.

General lockdown rules and workplace situations

Regulators had to adapt certain new rules to maintain business continuity, managing and overseeing the immediate health response by the industry, and subsequently seeking to identify and understand the consequential effects of the pandemic in the near and longer term. They relocated staff to working from home and some established so called COVID-19 Regulatory Taskforce which undertook a coordinating role during the period of highest activity. In some cases, they issued new acts which regulated the management of the health, emergencies and the consequence protocols for hazardous establishments. An assessment was carried out to determine to what extent businesses were essential, or if work was required to be carried out by minimal personnel in order to maintain critical integrity to a facility or ensure that a site remained safe to the public. For those sites in some countries it was explicitly requested to continue to operate in compliance with the adoption of essential standards for health and process safety.

Guidance materials and safety plans relating to COVID-specific matters in the process safety industries were published to assist industrial sites to maintain process safety in the event of shutdown or reduced operations. Regulators shared the bulletin published by the EU Joint Research Centre on pandemic measures and chemical process safety to provide insights and key learnings to high hazard operators.

Status of inspections during the pandemic lockdown period

Some regulators suspended on-site inspection activities due to restriction of movement within their territory; deferring all non-essential site inspections and prioritising actual visits to critical response work, such as following an incident, or where the risk to workers or communities justified a physical visit. Some regulators maintained inspection frequencies, but due to field access restrictions they reverted to a virtual style inspection linking with field and office-based personnel focussing on key



themes. For example, oversight audits (2 facilities) were conducted virtually which were limited to review of documents. That approach was later modified to site visits recommencing for oversight audits. Desired social distancing requirements are followed during these site visits. A few adjusted their focus of their activities, including visits to business premises and sites which will be conducted in line with social distancing regulations and guidelines. For some, inspectors have prioritised operational work planned for the full operational year including work that can be done remotely and work that will require a site-visit. As restrictions eased after the initial lockdown, we were able to return to carrying out site visits. Inspectors carry out a Covid-19 inspection at all visits to confirm that sites have adequate Covid-19 controls in place and that the site has followed Government advice.

For those who have suspended inspection activities, they are now restarting these applying mixed mode: through videoconference for the documentary aspects, and on-site inspection to verify the status of the installation and the methods for carrying out emergency simulations, the functionality of critical technical systems, personnel awareness and competence, etc.

For some regulators, remote inspections were continued utilising video conferencing, interviews with site health and safety representatives, screen sharing and document exchange. Site visits were restricted to inspections – whatever could be done remotely was done remotely.

Inspection questions were prepared in the form of a survey/questionnaire that was issued prior to the inspection and then discussed to populate. This approach was particularly effective in achieving consistent inspection focus and comparable responses that could rapidly identify different practices.

Special attention was paid to the management methods during the pandemic of the emergency planning, the maintenance, the operating procedures with reduced staff and subsequent re-commissioning or starting-up post lockdown. The focus for Inspectors has shifted to verifying that elements of the safety case/report are in place on site and following up with operators on future inspection topics identified during the safety case/report assessment. Much of this work has been able to occur through virtual meetings and/or email and phone contact. For example, operators have been able to send through updated safety management system documents for inspectors to review.

Audits were initially cancelled. Experiments with virtual audits and desktop assessments were carried out. They are particularly useful if the problem is known and the operator has the equipment and experience in such auditing. These virtual audits were not good at detecting the abnormal or orientating a new inspector. They also take approximately twice the time to complete (although face to face time is approximately the same). Face-to-face audits have resumed subject to a risk assessment co-developed with the site operator.

Licensing activities

Licensees under the statutory requirement must have and maintain fit for purpose management systems and controls in place to address risks and to maintain up to date risk registers. COVID-19 is one of those risks and in turn licensees have developed fit for purpose COVID19 management plans and programs. Some licensees undertook and submitted reports into an emergency response exercise testing their COVID19 response.



Another example is Dangerous Goods driver licence renewals. Usual requirement for renewal is completion of pre-requisite face to face training with a Registered Training Organisation to demonstrate ongoing competency. With the restrictions around physical interactions, some jurisdictions agreed to a 6-month exemption for requiring evidence of such training completion. All other requirements would continue to apply eg medical history checks.

A couple of sites were granted 6-month extensions to their existing licences, due to their inability to conduct pre-requisite safety assessment workshops with their workforce.

Licence audits had to be cancelled and interim licences of 2-year duration were issued where required based on a strong safety case and safety assessment. The intent is to conduct the verification as soon as possible and adjust the licence duration appropriately. In other instances where the safety case itself was weaker the licence renewal remained in force as the regulator had not made a decision – with the expectations that the licence decision would be made as soon as practicable. All possible courses of action were discussed with the site operators to maximise transparency.

Communicating best practices with operators

It is very important to highlight, that inspectors have maintained communication with major hazard facilities during the pandemic lockdown period, checking in regularly (virtually) to understand any changes in the site's risk profile and offer guidance where required.

One regulator, for example developed a COVID-19 project which was mainly a “Proactive Compliance Campaign communication plan” with sharing of educational script. All the stakeholders/ industries were contacted for this including hazardous facilities.

Majority of the regulators developed surveys that were sent out to high hazard facilities to gather a range of information about the preparedness of operators to manage a response to COVID-19. The surveys were reviewed, and follow-up discussions were held with operators to address any areas of uncertainty and provide additional guidance to operators. This enabled the regulator to ensure that high hazard operators maintained an appropriate level of personnel to safely operate, that management of change processes were being followed in relation to reduced personnel levels and other implemented public health measures, and that appropriate plans were in place for operations to resume normal operating levels post-lockdown.

Regulators encouraged the establishment of forums for information exchange between duty holders. These have been highly effective in facilitating rapid exchange of leading practice and cooperative efforts to identify and address challenges. Furthermore, some issued safety alerts relating to the risks associated with COVID-19 roster changes. Another survey of operators has been distributed to gather information about current approaches to work scheduling, and the corresponding fatigue and psychosocial risk management practices implemented.

Following inspections, an exemplar document was produced and shared with industry highlighting best practice approaches within industry. That document was also shared with health and safety representatives to promote discussions between members of the workforce and operators on practicable best-practice approaches.



In summary, most of the responders highlighted that they introduced virtual meetings, forums with industries, either on a weekly or monthly basis to discuss around sharing best practices, difficulties in mobilising members of the workforce in a timely manner. Regulators regularly discussed and promoted best practices with industrial sites and addressed emerging issues eg content and level of detail required in safety case relating to pandemics and COVID-19.

As it became apparent that the pandemic was likely to continue to affect the industry for an indefinite time the focus then shifted to the impacts of the pandemic on workforce health and safety. In particular, topics such as reduced persons on board leading to reduced employment and impact on contractors, and associated concerns over reductions in maintenance; changed rosters – including relocation of workers from other jurisdictions, quarantine periods for travelling workers, mental health issues associated with workers being away from families for extended periods and also the pre-swing isolation periods. Mental health and maintenance backlog remain the prominent topics of discussion. Also, of concern is access to highly specialised contractors, due to travel limitations.

Changes in future inspections and regulatory methods

COVID-19 had an overall effect on the inspection regime and as a result, it will change in the future. For example, to include COVID-19 Management in the inspection scopes, which means discussing fatigue, mental health and general COVID-19 risk management with eg offshore health and safety representatives and facility management teams.

Most important priorities for the operators any changes or additions to the Safety Management System procedures made due to the situation that has resulted in any work reorganisation measures adopted (limitations on the co-existence of personnel in confined areas, if any) and the possible reshaping of personnel training activities. With reference to the obligations established by the legislation; the risks assessment associated with any non-operational status or reduced operation of the plants, eg linked to the presence of dangerous substances; the management of maintenance activities with particular attention to critical technical elements, according to the planned schedule (problem of availability of maintenance personnel, own or of third-party companies, availability of warehouse material and spare parts); the internal emergency plan and its implementation, with particular reference to the events to be managed in any situations of limited availability of personnel or absence of personnel (surveillance activity) essential for the composition of the emergency team; the correct management of change procedures.

Final thoughts and learnings

COVID-19 presented greater challenges to high hazards operators to meet compliance around legislative requirements.

In terms of the period of resuming the inspection activities, and the need for a safe performance of these, first of all, regulators will proceed to respect the site access protocols and related health measures, but above all to optimise the control activities, making the inspections even more functional. In fact, remote document verification will be privileged and during on-site inspection, the attention will be focused only on the plants, for the consequent collection of objective evidence.



Rationalisation of inspection activities with the introduction of remote conduction methods (documentary verification) and limitation of on-site inspections for verification purposes (technical checks of critical systems, emergency simulation, etc).

Improve the analysis of anomalous situations (which can arise in case of a reduction in internal and external personnel, changes in processes, etc), in order to ensure the normality of operating conditions and compliance with the requirements of the Safety Management System.

Greater attention to the verification of the management procedures of "transitory" (plant shutdown and restarts, with the relative need to carry out a "pre-startup safety review").

References

ISC (2020) Managing Process Safety during the COVID-19 Pandemic, May 2020 at <https://www.icheme.org/media/13927/managing-process-safety-during-the-covid.pdf> accessed on 05/10/2020

JRC MAHB (2020) Pandemic Measures and Chemical Process Safety Special Issue COVID-19 Lessons Learned Bulletin at https://minerva.jrc.ec.europa.eu/en/shorturl/minerva/llb_covidv3pdf accessed on 05/10/2020

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Government of South AU Department for Energy and Mining
ISPRA Italy (Fabrizio Vazzana)
NOPSEMA
SafeWork NSW
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