

WHY ARE PRE-START HEALTH AND SAFETY REVIEWS IMPORTANT?

By Sherin Khalil, P.Eng., PMP

Section 7 of Regulation 851 of the *Occupational Health and Safety Act* (OHSA) requires that, in certain circumstances, an owner, lessee or employer obtain a pre-start health and safety review (PSR) prepared by a practitioner. The purpose of the report is to ensure that a timely professional review identifies the non-compliance items and indicates what measures are necessary to bring the apparatus, structure, protective element or reviewed process into compliance with applicable sections referenced in section 7 of Regulation 851.

COMPETENCY AND DISCLOSURE

Engineers' ability to carry out PSRs is critical. Any missing or misleading information in a PSR may lead to injuries or fatalities that can have a tremendous impact on families and communities. Therefore, practitioners providing PSRs must be competent to avoid serious consequences to the public and practitioners.

Practitioners providing PSRs should be reminded of their obligations under the *Professional Engineers Act* (PEA) to only accept and undertake work within their expertise and demonstrate due diligence in completing PSRs. Practitioners should be familiar and comply with applicable codes, standards, the OHSA and regulations for industrial establishments. Practitioners should clearly define their scope of work that outlines any limitations or restrictions and consult their legal counsel in writing their agreements and scope of work prior to commencing their projects.

Where the PSR requires the evaluation of a complex system, the practitioner should advise the client/owner of the involvement of a multidisciplinary team to undertake the work. In such a case, the PSR should indicate the team members, their professional designations and their scope of work.

RELEVANT DISCIPLINE CASES

There are a number of relevant discipline cases that highlight the consequences of providing inadequate recommendations when undertaking PSRs. In 2015, an engineer pled guilty to sealing an engineering opinion that failed to recommend an adequate safeguarding barrier over the in-feed conveyor on a shrink wrapper machine and failed to recommend certain required hard-wired, or equivalent, interlocks as safety features on shrink wrapper machines. As a result of an inadequate recommendation, an employee reached through the tunnel guard into the shrink wrapper while it was in operation. The employee's forearm was pushed against a rail inside the machine, resulting in a broken arm, requiring surgery. The engineer acknowledged all errors and omissions contained in the PSR that caused the injury (see Summary of Decision and Reasons, Association

of Professional Engineers of Ontario v. Antero M. Gomes, P.Eng., *Engineering Dimensions*, March/April 2018, p. 36).

In another instance, on or about March 20, 2007, the Ministry of Labour inspected the guarding of welding robot cells and the inspection revealed that the guarding, as installed, did not comply with OHSA, R.S.O. 1990, Regulation 851. A subsequent review by an independent expert revealed possible errors, omissions and discrepancies with respect to the safety issues identified in the PSR prepared by an engineering firm. This resulted in an allegation that the engineering firm was guilty of incompetence and/or professional misconduct as defined in the PEA (see Decision and Reasons, Abraham Bueckert, P.Eng., and AB Engineering Inc., *Engineering Dimensions*, March/April 2011, p. 39).



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CONFLICT OF INTEREST ISSUES

At times, in-house engineers who undertake a PSR for their employers may face pressure to prepare a report that is favorable to their employers. In such a case, engineers should be reminded of their obligations under the PEA and should be aware that section 31(2) of the OHSA speaks to the duties of engineers within the context of OHSA.

Furthermore, in some situations, clients may request that practitioners discuss the PSR at various stages before submitting the final report. Practitioners must not permit clients to exert undue influence on reports and must not agree to alter their reports to distort their opinions. (For more information on engineers' duty of honesty and best practices in preparing engineering reports, see "Honesty, integrity and engineering reports," *Engineering Dimensions*, September/October 2015, p. 36.)

CONSIDERATION FOR CLIENTS/OWNERS

For their own benefit, the client/owner may want to take a proactive approach by considering the PSRs at the early stage of the design rather than adding costly controls and/or safety devices afterward to bring the equipment or system into compliance. Delaying PSRs may be costly and cause operation interruption. In April 2011, a worker was

killed as a result of multiple traumatic injuries while cleaning up an industrial pasta maker. An assessment by the ministry's regional engineer determined that a PSR, as required under Regulation 851: Industrial Establishments, had not been completed prior to operating the equipment at this location. The company was fined \$120,000, and the supervisor was fined \$12,000, plus a 25 per cent victim fine surcharge to assist victims of crime. (For more information on the case, see *Repeal of the Industrial Exception Data Gathering and Analysis Research Project Final Report*, www.peo.on.ca/sites/default/files/2019-10/RepealResearchProject-FinalReport_0.pdf.)

Prior to retaining an engineer for the review, clients/owners should consider requesting that practitioners demonstrate their relevant experience, competence and knowledge with regards to the work to be undertaken by providing examples of recent projects they have worked on, while respecting the confidentiality of these projects. After the completion of a PSR, should any modifications occur to equipment, particularly in a way that affects a safety feature, a practitioner should be retained to ensure the equipment is still in compliance.

IMPLEMENTATION OF THE PSR's RECOMMENDATION

In January 2017, the *Repeal of the Industrial Exception Data Gathering and Analysis Research Project Final Report* was provided at the request of PEO Council (see "PEO brings new data to industrial exception repeal campaign," *Engineering Dimensions*, March/April 2017, p. 8). In this report, details of injury and fatality statistics were investigated and provided. It was indicated that the completion of a PSR was not identified in over half of the reviewed cases that led to either injuries or fatalities. Approximately 28 injuries of the reviewed cases were due to lack of guarding, inadequate guarding or guarding that was removed or circumvented. Further, it was determined that worker injuries and/or fatalities still occurred even with the completion of a PSR due to the lack of implementation of the recommendations made in the PSRs. For example, in one instance, a worker was struck and pinned by dropping a conveyor assembly. After the death of the worker, the PSR was provided, but the recommendations in the PSR were not implemented. In another case where a critical injury occurred after the PSR was completed, a worker's hand was caught in the pinch point of feeding rollers.

Furthermore, some clients/owners choose to remove the safeguarding systems or bypass safety devices to speed up the production after the completion of the PSR. It must be noted that the safety devices are designed to prevent hazards from occurring. These safety devices should be connected while process or equipment is in operation to protect workers, facilities and the community. Consequently, it is advisable to implement the recommendations made in PSRs and keep safety devices in place and in operation.

Finally, practitioners are encouraged to read the existing PEO guideline *Professional Engineers Providing Reports*



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for *Pre-Start Health and Safety Reviews*, which can be found in the Knowledge Centre of PEO's website. Currently, the Professional Standards Committee is reviewing this guideline and investigating the current statutory, ethical and professional aspects of providing services on PSRs. The revised version of the guideline will be available for public consultation soon.

PEO's practice advisory team is available by email at practice-standards@peo.on.ca for practitioners looking for information on their professional obligations. For legal issues, engineers must consult their lawyers.

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