

## Discussion Paper

### Primer for Consultation on Alternative Safety Approaches

To better prepare you or others in your organization prior to attending these stakeholder engagement sessions on Alternative Safety Approaches, the Authority has developed the attached material that outlines:

- The broad process the proposed regulations could lay-out for submitting a Safety Management Plan (SMP).
- The processes an owner/operator would undertake to develop an SMP as well as the information an SMP would have to contain,
- The broad process or steps the Authority would take in assessing an SMP and then deciding whether to accept the SMP,
- The function of the SMP in the future relationship between the owner/operator and the Authority following acceptance.

It should be emphasized that the following material is not 'cast-in-stone'. The Government and BC Safety Authority are seeking comments, suggestions and feedback from various stakeholders who may be interested in the Safety Management Plans approach. During the stakeholder consultation sessions, the BC Safety Authority will ask a number of questions to seek your input on how to develop operational practices, policies and regulations with respect to Safety Management Plans.

Both the process and the proposed contents for what a Safety Management Plan would need to address are modeled on best practices for such approaches taken from other jurisdictions. These include Ontario, Newfoundland and Nova Scotia offshore sectors, the UK and Australia (both at the State and Federal Level). However, every jurisdiction is different and for these approaches to work it is vital that the regulatory tools and mechanisms are proportionate to the risks that exist in British Columbia. We would be pleased if you or someone from your organization will attend one of the sessions planned for July and August.

## ALTERNATIVE SAFETY APPROACHES

### **Background**

On June 3, 2010, Bill 20, *Miscellaneous Statutes Amendment Act (No. 3) 2010* was passed by the Province of British Columbia. That Act contained changes to the *Safety Standards Act* that will come into force on a date to be determined pending further consultation.

These changes to the *Safety Standards Act* were precipitated by a number of interrelated issues:

- ❖ The pace of technology and safety management innovation has been exceeding that of existing prescriptive regulation, codes and standards;
- ❖ Increasing need to develop regulatory tools that address systematic safety management in addition to the existing individual or case-by-case approach;
- ❖ Increasing demands to eliminate barriers for economic development in emerging technologies and industries;
- ❖ Need to develop an integrated safety programs approach for industries that cross technologies.

### **Alternative Safety Approaches (ASA)**

#### **"alternative safety approach"**

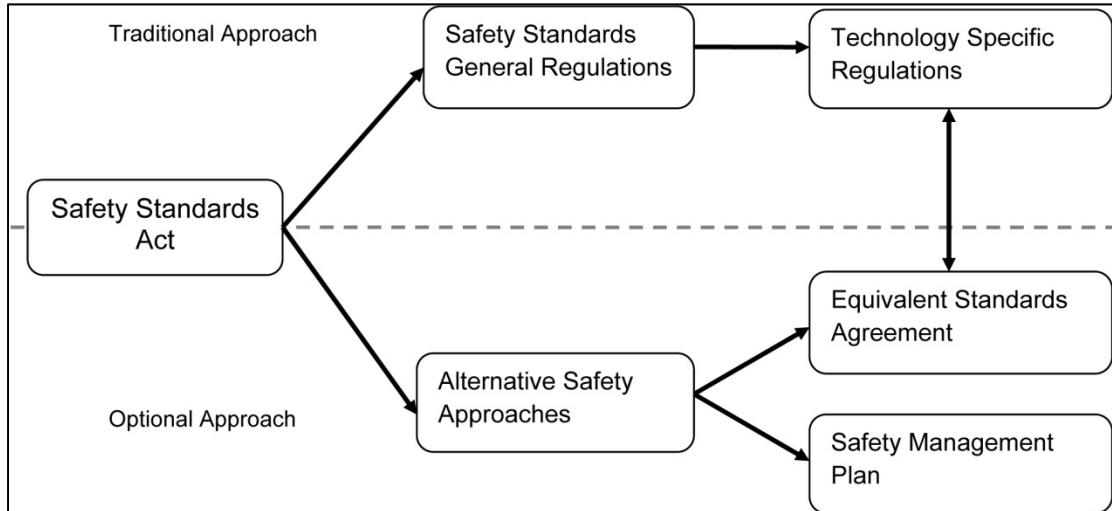
a written proposal, accepted by a safety manager under section 33, which

(a) sets out approaches to safety that are consistent with the objectives under this Act and are substituted for one or more requirements of the regulations, or

(b) if the regulations do not address safety in respect of particular regulated work or a particular regulated product, establishes a plan consistent with the objectives under this Act for the safe undertaking of that regulated work or the safe use of that regulated product;

The changes to the *Safety Standards Act* introduce a new concept called "alternative safety approaches". The definition of alternative safety approach has been copied from the Act and is included in the box to the left. The new concept expands on the present tool called an "equivalent standards agreement". It does so by enabling regulations to be developed that will provide further flexibility to stakeholders in "how" they achieve acceptable levels of safety. The current "equivalent standards agreement" tool will largely remain as-is and a new tool called a "safety management plan" is proposed to be added to the regulations. Both tools will be available and *optional* in the alternative safety approaches.

The following diagram illustrates the relationship of alternative safety approaches to the prescriptive requirements of the regulations. Note that the approaches run parallel to one another as different "streams" to achieving the safety objectives of the Act.



### ***Safety Management Plan***

A safety management plan presents a structured approach for a proponent to demonstrate that their regulated activities are safe. Using well established fundamentals of hazard mitigation and risk management, a safety management plan requires a proponent to address certain elements that will be established in the regulations. If accepted by a safety manager, a safety management plan can serve as an alternative to all of the requirements of the regulations that are identified in the plan. Moreover, a safety management plan can be used for multiple technologies and for those cases where innovative new technology has not yet been addressed by adopted codes and standards (i.e., when no requirements currently exist that can be “substituted” for).

As currently envisioned the process for submitting a Safety Management Plan will entail two broad stages:

| The Two Stages of Applying for and Submitting an SMP   |
|--|
| <ol style="list-style-type: none"> <li>1. Notification or submission of an application to the Authority of the intent to apply for a Safety Management Plan,</li> <li>2. If accepted, development and then submission of the Safety Management Plan itself.</li> </ol> |

### **Stage 1 - Notification or Application to submit an SMP**

Where an owner/operator (i.e. a proponent) decides they want to avail themselves of the alternative approach of developing a Safety Management Plan, the first step would be to notify the appropriate Safety Manager in the Authority of their intent to develop and submit a Safety Management Plan. The following steps are those that are envisioned an owner/operator would take in submitting an application:

### Steps to Apply for a Safety Management Plan

- 1) Review their operations or planned operation, equipment or facility, etc. and identify the various equipment covered by the Safety Standards Act and the subsidiary regulations,
- 2) Undertake a preliminary screening or assessment of the potential hazards associated with the equipment and operations and do a first-order estimate of the 'worst case' potential consequences of an accident.
- 3) Compare the worst case consequences to a set of hazard tier criteria the Authority would develop and publish,
- 4) Download an SMP application template from the Authority's website (template to be developed). The template will likely request information of the following nature:
  - a) Factual information concerning the owner/operator, the physical location of the site or facility for which the SMP application is being submitted as well as the location of the offices for the owner/operator if different;
  - b) A short description of the equipment and operation the SMP is intended to cover,
  - c) A short description of the environment surrounding the facility or operation (e.g. undeveloped land, land for agricultural purposes, within a town or city boundary, etc.)
  - d) A short overview of the regulations the alternative SMP is intended to address,
  - e) The hazard tier the owner/operator has assigned the facility or operation and a short description of the method used for establishing the hazard tier,
  - f) A proposed timeline for completing the development and submission of the SMP

On receipt by the Authority, the appropriate Safety Manager would review the application and where it was felt necessary either request further information or possibly arrange a meeting and inspection of the site with the proponent. The Safety Manager might then:

### Authority Options for Accepting an SMP Application

- ❖ Accept the application, along with the timeline for developing the SMP itself,
- ❖ Return it and suggest areas where the proponent must provide further information before it can be accepted,
- ❖ Return it and suggest that the issues raised could be better addressed through an Equivalent Standards Agreement, or
- ❖ Refuse to accept the application.

Where an application is accepted the Authority would notify the proponent of its acceptance and the timeline for developing and submitting the SMP to the Authority. The proponent will then be responsible for undertaking various reviews and evaluations of their operations and equipment, writing the SMP and submitting it to the Authority within the agreed timeline.

## Stage 2 - Preparation of the SMP and Submission to the Authority

The requirements that follow are the proposed key requirements for developing and writing a Safety Management Plan. It should be noted that, in some cases, third party verification of parts of the plan may be required. Third party verification could include verification by a professional engineer or by a quality assurance organization depending on the circumstances.

The BC Safety Authority intends to develop guidelines to assist proponents in developing their safety management plans and guide safety managers in their evaluation and acceptance of an SMP.

A safety management plan would nominally include the following information to be considered acceptable by the Authority:

### **General/Administrative Information – Section 1**

- ❖ Various administrative information (*location of the facility, legal name(s) of the owner(s)/operator(s), contact details, organization chart showing various responsibilities*)
- ❖ A list of the regulatory provisions or requirements the alternative approach to safety (i.e. the SMP) is intended to address
- ❖ A short rationale for why the proposed safety management plan would provide an acceptable level of safety
- ❖ The names and signatures of individuals responsible for implementing the provisions and requirements contained in the SMP

### **Description of the Equipment, Facility or Operations - Section 2**

- ❖ Description of the equipment, facility and operation and its overall intended purpose or function (e.g. generate and supply power, manufacture a product, etc.)
- ❖ Description of any generally recognized engineering and industry standards, codes or recommended practices the equipment was designed to or manufactured under.
- ❖ Description of the neighbouring surroundings especially any facilities that could be viewed as particularly vulnerable or sensitive to an accident (e.g. a watercourse, a protected species of animals or vegetation, a school, hospital or emergency service facility, etc.)
- ❖ Attestation of some form that the equipment is fit for its intended service or purpose and that the operating parameters are within the design limitations of the equipment. This could entail third party verification.

### ***Hazard and Risk Classification and Identification - Section 3***

- ❖ That a recognized and generally accepted hazard process was undertaken and that all reasonably foreseeable hazards are identified in the plan,
- ❖ A summary description of the techniques and methods used to:
  - Identify the various hazards the equipment and the operation of the equipment could present,
  - Evaluate the severity of the potential consequences of an incident or accident arising from the operation of the equipment,
  - Assess the likelihood or probability of a potential accident occurring
- ❖ The individuals involved in performing these studies and that members of the staff or workforce who operate and maintain the actual equipment actively participated in these studies,
- ❖ The overall hazard rating of the facility

### ***Risk and Asset Integrity Management - Section 4***

- ❖ A list of standards that are, or are proposed to be applied to the regulated products being used or regulated work being conducted
- ❖ An overview or summary of the plans for maintaining and assuring the on-going integrity of regulated equipment, products or activities,
- ❖ An overview of the plans for assuring and maintaining the competency and qualifications of staff responsible for the management, operation and maintenance of the regulated equipment, products or activities.
- ❖ Means for assuring the equipment or products will be operated safely and in a manner that will not exceed its design limitations,
- ❖ A demonstration that all risk control measures (both hardware and of an administrative nature) control the risks of all reasonably foreseeable incidents to levels that are As Low As Reasonably Practicable.
- ❖ How changes to the equipment, operations, staffing, etc. will be managed to assure the risks of an incident are continually managed to ALARP levels

### ***Preparations in Case of an Emergency – Section 5***

- ❖ A description of the plans and measures in place to mitigate the consequences of a potential incident,
- ❖ A description of the plans to respond to an emergency especially where the emergency requires the intervention of the local emergency services,
- ❖ Details with respect to the documentation and reporting of incidents including the names of individuals responsible for ensuring that reporting occurs as specified in the plan

### ***Means for Continual Improvement – Section 6***

- ❖ The provisions made within the owner/operator's own management programs and practices to monitor, inspect and audit periodically the equipment, the operations, the systems and the staff to assure continuing safety of the facility,
- ❖ The provisions made to investigate incidents, near miss situations and irregularities in the operation of the equipment,
- ❖ Details concerning the periodic review and updating of the Safety Management Plan

On completion of developing the Safety Management Plan the proponent will then send the Plan to the Authority for review and acceptance.

The proponent cannot change or vary the manner by which it operates its facilities until the proponent is notified that the Authority has accepted the proponent's SMP.

***Acceptance of the SMP by the Authority***

On receipt of the Plan, the Authority will first undertake an administrative review of the plan to determine if there is any missing information or where information provided is at variance from information on the facility or owner/operator already on file with the Authority. Where it is felt there is missing information or the need to revise certain information, the proponent will be contacted and asked to submit the missing information or verify any differences.

Following the administrative review, the appropriate Safety Manager or their delegate will undertake an initial read of the Plan for completeness, to determine and assign an assessment lead, and to develop a plan for the assessment process. Where the equipment, facility or operation is considered technologically complex or the plan entails multiple technologies, or the hazards could lead to potentially severe consequences the safety manager may decide that an assessment team will need to be formed. In other cases, it may only require a single individual to complete the assessment.

Once the assessment plan is developed, the proponent will be notified of the name and contact details of the assessment lead as well as the timeline that has been established for completing the assessment process.

As the assessment progresses, the need for further information or clarification of some of the information provided may arise. Where this occurs the assessment lead will be the focal point for all interchanges and interactions between the Authority and the proponent for requesting further information. In some cases the assessment lead may decide there is a need to meet with the proponent as well as physically inspect the equipment, facility or operation to understand better a certain point or issue in the SMP. The assessment lead would contact the proponent in these cases and arrange such a meeting or inspection.

On completion of the assessment, the Lead will compile a list of findings or observations concerning the SMP as well as their recommendations regarding the SMP. The Lead will meet with the appropriate Safety Manager to review these findings and recommendations. The Safety Manager will then decide whether to:

| Authority's Options for Accepting an SMP   |
|--|
| <ul style="list-style-type: none"><li>❖ Accept the SMP as submitted,</li><li>❖ Accept the SMP and whether in the SM's opinion there is a need then to attach certain terms and conditions to the SMP,</li><li>❖ Return the SMP to the proponent requiring specific changes and require the SMP to be resubmitted, or</li><li>❖ Reject the SMP.</li></ul> |

The Safety Manager will then develop a letter to be sent to the proponent notifying them of the Authority's findings as well as its acceptance, its return or the rejection of the SMP.

Only after being notified that an SMP was accepted may the proponent begin to implement the alternative approach to operating their facilities either as contained in the accepted SMP or the accepted SMP along with any terms and conditions.

## The SMP, the Proponent and the Authority

Following acceptance of the SMP it will form the primary tool the Authority will use to interface with the proponent. The owner/operator will have a duty to comply with all the provisions as contained in the SMP as well as any terms and conditions the Authority attached to the SMP. It is standard practice in other jurisdictions that have adopted this approach for the regulator to conduct audits by reviewing past audits the proponent themselves have undertaken whether those audits were conducted internally or where the proponent brought in a third party. From that starting point the Authority may determine the need to supplement its audit of the proponent with specialists of a technical nature or in the areas of management systems, human factors, etc. Where the Authority decides to conduct an inspection of a facility or site with an accepted SMP in place, the SMP will be the tool the Authority uses to plan that inspection. Where an inspection or audit by the Authority identifies a variance or deviation from what is contained in the SMP, the Authority will have the following powers:

| Enforcement of the Provisions of the SMP  |
|---|
| <ul style="list-style-type: none"><li>❖ A Safety Officer may issue a formal notification of non-compliance requesting the proponent to comply with a particular provision or provisions of the SMP,</li><li>❖ A Safety Officer may issue a compliance order, requiring the proponent to comply with a particular provision or provisions of the SMP,</li><li>❖ A Safety Manager may issue a safety order or a discipline order in respect to the non-compliance, and</li><li>❖ A Safety Manager may impose a monetary penalty for non-compliance.</li></ul> |

Where an inspection or audit of the SMP by the Authority identifies a serious deviation or variance from the Safety Management Plan, a Safety Manager may also take the action of suspending or possibly canceling the applicability of the SMP. Where that occurs the proponent would be required to comply with all applicable provisions of the Safety Standards Act and regulations. Suspending or canceling an SMP could seriously impact a proponent. We are interested in obtaining feedback from participants on would be a fair process to follow in suspending or canceling the applicability of an SMP.

## **Concluding Remarks**

As noted in the cover letter the above processes as well as description of what a Safety Management Plan might be required to contain is modeled after the regulatory requirements enacted in other jurisdictions.

The Authority hopes that you or other representatives from your organization will be able to attend one of the stakeholder engagement sessions we will be holding in July and August. We welcome your participation to provide your input, views and feedback on what is proposed. It is our hope that this briefing document will have better prepared you to provide such feedback at one of these sessions.