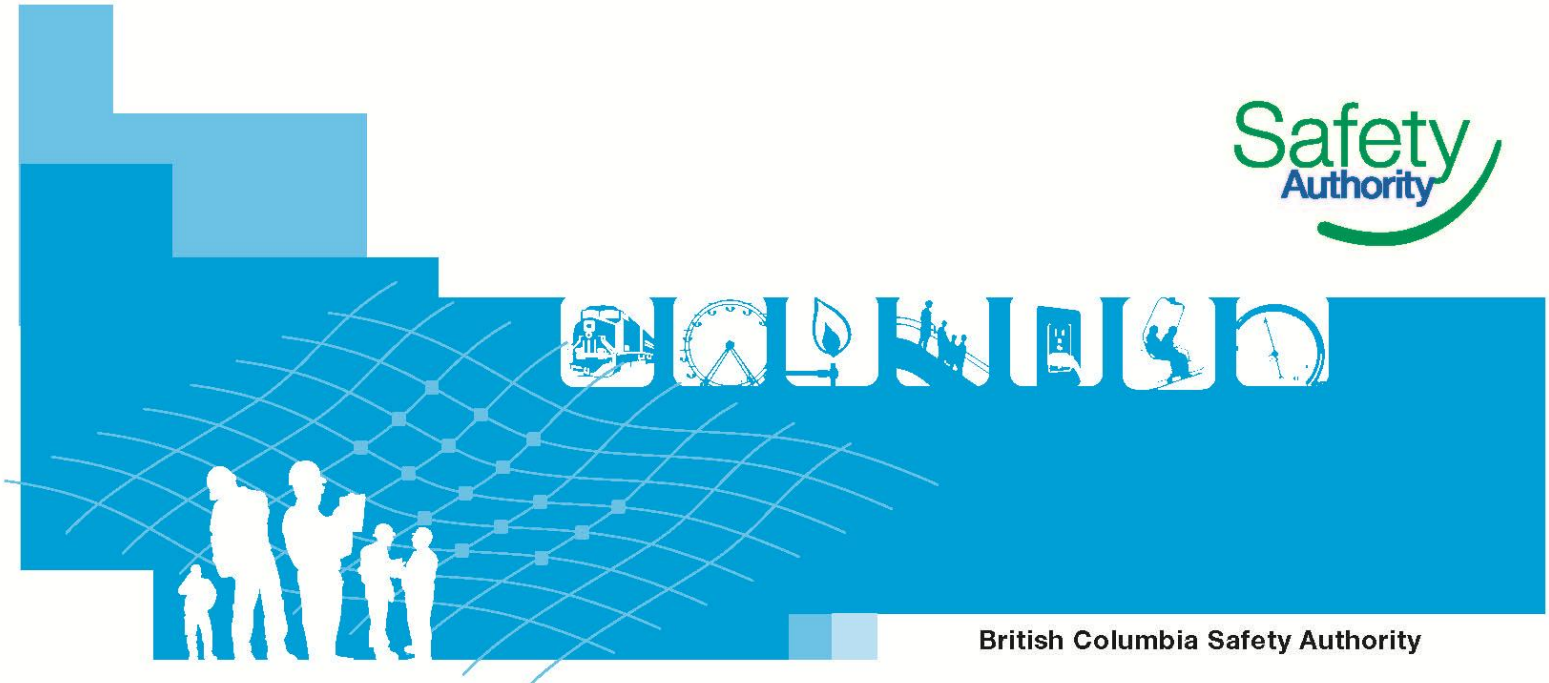
Alternative Safety Approaches Safety Management Plan Application Guide



Safety Authority

British Columbia Safety Authority

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At the BC Safety Authority, we keep people safe by mandating the safe installation and use of technical equipment. As the Province's delegated authority, we administer safety standards and enforce compliance. We also issue permits and licenses, educate, and conduct risk based, onsite inspections. We continuously advance the standards of safe practices in British Columbia.

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1.0 Purpose

This manual has been created to provide guidance for proponents[1] wishing to submit an application for consideration of an alternative approach to achieving safety outcomes through a Safety Management Plan.

The material presented here does not replace the applicable legislation. To ensure the most comprehensive understanding of the application requirements, the user is encouraged to read the applicable sections of the *Safety Standards Act* (SSA), the *Alternative Safety Approaches Regulation* and associated guidance material. If and when necessary, you may also seek assistance from BC Safety Authority staff for clarification.

Regulation requires certain information to be provided when applying for a Safety Management Plan; this guide explains these requirements. To make a submission, the proponent must submit a completed application form[2] and provide, on company letterhead or other suitable material, additional information as requested in this guide. The application form can be found on the B.C. Safety Authority website or at any B.C. Safety Authority office.

2.0 Scope

A submission for a Safety Management Plan is done in two parts; an application and a proposal. Before a proponent submits a proposal, an application must first be accepted by the BC Safety Authority, and notification of that acceptance must have been received b the applicant. This document provides guidance to an applicant wishing to submit an application for a Safety Management Plan.

3.0 General Information

The Alternative Safety Approach process requires a high level of commitment from both the BC Safety Authority and the proponent, and given that the Equivalent Standard Approach and Safety Management Plan tools can cross over in their function, it is suggested that all proponents have a discussion with the BC Safety Authority to validate their planned approach prior to submitting an application. The following provides some general high-level guidance for Safety Management Plan applications.

[1] Alternative Safety Approaches regulation definitions provides further clarity
[2] Alternative Safety Approaches Application Form FRM-1356-00

An application may be submitted to a provincial safety manager in respect of any regulated product, regulated work or premises.[3] [4]

A complete application consists of the information from a completed application form, the additional information sought in sections five through nine of this guide, and the appropriate application fee. Submission of the information requested in sections five through nine should be made on the applicant's company letterhead. For an application to be received by the BC Safety Authority, it must be complete.

After receiving the application, an assessment can begin. The B.C. Safety Authority may request further information before making a determination. This request for additional information is most commonly made for clarification or elaboration of material that was submitted as part of the application, and in most cases should be readily available.

A safety manager may require an applicant to retain a qualified professional to review and report on all or part of the application.[5]

Once a determination has been made, the B.C. Safety Authority will provide written notification of the outcome. A decision made by the provincial safety manager to reject an application for an Alternative Safety Approach is not appealable, [6] and therefore it is highly recommended that a proponent wait until they have received the letter of notification before beginning work on their proposal. In the event an application has been rejected, an operator may submit another application with no waiting period.

If a proponent decides to terminate their Alternative Safety Approach application, written notification from the proponent must be provided to the B.C. Safety Authority. Where notification has not been received, a determination may be made based on the information that has been received. This determination would become part of the registry.

[3] Safety Standards Act definition of premises "means land, a building or structure in, on or under which a regulated product is located or where regulated work is done;"
[4] Alternative Safety Approaches Regulation, 3 (2) (a) (ii)
[5] Alternative Safety Approaches regulation 4 (3) (b)
[6] Safety Standards Act 33 (5) (b)

4.0 Application Form

The following sections 4.1 to 4.4 are guidance to completing the application form (FRM-1356-02). This completed form, the information requested for submission in sections five through nine of this guidance, and the payment of applicable the fee - when submitted together - form a complete Safety Management Plan application.

4.1 Application Type

If this application is for renewal of or revision to an existing Safety Management Plan, information regarding that plan must be provided (Alternative Safety Approach number, date of expiry and name on original); applications for renewal or revision without this information will *not* be accepted.

4.2 Applicant's Information

An applicant for a Safety Management Plan must be the operator of the establishment[7] that will be the subject of the Safety Management Plan. If an establishment is being managed by a company that is not the owner, then that company is considered to be the primary operator. Owner information must still be included with the application (see section 4.0 below).

The applicant for a Safety Management Plan must provide verification of their legal name. If application is being made by the primary operator, please provide a brief description of the relationship between the owner and operator.

4.3 Authorized Representative

The name and contact information of the individual who will be responsible for the Safety Management Plan application must be provided. The authorized representative must be an employee of the applicant.

4.4 Owner information

If the primary operator of the site is not the owner, provide the owner's name and contact information.

[7] See section 6.1 for further information on "establishment".

5.0 Alternative Approach

5.1 Proposed Exemption

Safety Management Plan applicants must provide a listing of or description the *specific* requirements in regulations, standards or codes, where an alternative is being proposed. Where an exemption – such as an adopted code or standard – has been listed, clear indication whether exemption is being sought in whole or in part would be required

This listing must take the form of *exact* reference; examples of a regulation, standard and code are:

- *Regulation*: Safety Standards General Regulation Part 2, 12 (1) "A person must obtain the appropriate permit from the regulatory authority before performing regulated work or using regulated product unless exempted from doing so under the Act."
- *Standard:* CSA 6.22-2003 (R2008) standard for line pressure regulators; seeking exemption in whole, or
- *Code*: National Board Inspection Code (NB23); seeking exemption in part by requesting exemption to Part 2 of the code.

All regulatory requirements not included will continue to apply

A Safety Management Plan may also apply to regulated work or product where there are no regulations, codes or standards adopted for use in British Columbia for the regulated product or activities proposed. Current examples of this are unique or new technologies that are not yet addressed in adopted standards.

In the event additional assistance is needed to determine how to present a specific requirement for exemption, please contact representatives within the Alternative Safety Approaches program.

5.2 Proposed Alternative

The applicant must describe the alternative in sufficient detail to allow for proper assessment. In cases where a proponent is seeking to replace a recognized or adopted standard with a standard for the same class of product but not adopted for use in British Columbia, the description may be fairly brief. Where the proposed alternative is an engineered solution using new and unique methods of doing regulated work, the description may need to be more extensive.

For each of the requirements listed for exemption, an alternative must be properly identified; clear linkage between the exemption being sought and the replacement must be shown.

An example could be as follows:

The proposed exemption is from the requirement in regulation (schedule of adopted codes and standards in the Power Engineer, Boiler, Pressure Vessel and Refrigeration Safety Regulation 2 (a)) to follow the National Board Inspection Code (NBIC) part 2. The safety objectives will be met be through adherence to the American Petroleum Institute (API) standards as follows:

- *RP 571 Damage Mechanisms Affecting Fixed Equipment in the Refining Industry*
- *RP 572 Inspection of Pressure Vessels*
- *RP 576 Inspection of Pressure- Relieving Devices*
- *RP 577 Welding Inspection and Metallurgy*
- *RP 578 Material Verification Program for New and Existing Alloy Piping Systems*
- *RP 579 Fitness-For-Service*
- *RP 580 Risk-Based Inspection*
- *RP 582 Recommended Practice and Supplemental Welding Guidelines for the Chemical, Oil and Gas Industries*
- *Publ 581 Risk-Based Inspection – Bas Resource Document*
- *Publ 2201 Procedures for Welding or Hot Tapping on Equipment in Service, and*
- *API 510 Inspector Certification Examination Body of Knowledge*

5.3 Equivalency

The objectives of the Safety Standards Act are not specifically listed, but are widely accepted as conforming to the principle where risk is reduced to a level “So Far As Is Reasonably Practicable” or, “As Low As Is Reasonably Practicable”. A description of how the alternative approach meets or exceeds these safety objectives must be included. [8]

A demonstration of an understanding of the safety objectives of the current regulatory requirements - coupled with an argument of how the proposed substitution will maintain or exceed these objectives - is essential to a meaningful and well reasoned submission.

Following the example above, an equivalency argument for an operator within the oil and gas sector wanting to comply with the requirements of the API-510 code only, rather than both the NBIC 23 and API 510 codes as regulation requires:

[8] As per the Alternative Safety Approaches regulation Part 2, Division 2 Part 6

Safety Objectives of the National Board Inspection Code; As per the code "It is the purpose of the National Board Inspection Code (NBIC) to maintain the integrity of pressure-retaining items by providing rules for installation, and after items have been placed into service, by providing rules for inspection and repair and alteration, thereby ensuring that these items may continue to be safely used.

NBIC Part 2, Inspection – This Part provides information and guidance needed to perform and document inspections for all types of pressure-retaining items. This Part includes information on personal safety, non-destructive examination, tests, failure mechanisms, types of pressure equipment, fitness-for-service, risk-based assessments, and performance based standards."

The American Petroleum Institute (API) 510 code is already adopted in the Power Engineer, Boiler, Pressure Vessel and Refrigeration Safety Regulation, with the additional standards referenced within the API 510. The API 510 was developed as an inspection standard specifically for the oil and gas industries, and is adopted as the primary standard throughout most of North America, including the off-shore oil and gas industry in the United States.

The API 510 code also accommodates the use of contract, internal or contractor inspections though the certification of inspectors to the API 510 Inspector Certification Body of Knowledge; a standard that all those that undertake inspections will be required to attain. The NBIC code allows only certain individuals to apply for National Board Commission as Inspectors; something that none of our inspectors may apply for by virtue of their employment.

The API 510 code exceeds the requirements of the NBIC 23 Inspection code by also requiring the development and implementation of an inspection plan for all pressure vessels and all pressure-relieving devices, something that the NBIC does not require, but is critical to maintaining the levels of safety our company requires.

The example above is brief for the purposes of this guidance document, and may not contain all of the arguments that could be put forward to justify the proposal, but nevertheless achieves the following objectives; an illustration of the framework for the proposal, and an outline of the required content for the application.

For the purposes of the application, extensive detail is not required, however, the case presented must outline the alternative in sufficient detail that assessors can determine that the methodology used to determine equivalency is sound in principle. Additional information used to fully explain how the proposed alternative will maintain or exceed the current requirements, as well as the control mechanisms that will be instituted to ensure that safety outcomes are being met and improved shall be presented in the Safety Management Plan proposal.

Useful resources when preparing the equivalency argument can be found in the high level statements on the purposes and objectives contained in most of the codes and standards, There are also guidebooks where rational is provided for specific requirements within a given code.

6.0 Establishment and Premises Information

Detailed guidance on the defined use of the terms establishment, premises and site are available in the ASA Guidance note: “Encyclopedia of Terms” available on the BC Safety Authority web site or through any BC Safety Authority office.

6.1 Establishment Location

If the establishment is located at a premises different to the addresses provided in section two or four above, the actual physical address, must be provided. Any legally recognized nomenclature will be acceptable for the purposes of describing the location of the premises such as a street address issued by a local governing authority, or a grid location identified using the Petroleum and Natural Gas Grid Regulation. Where a site name has been assigned to the location, please include it.

When the establishment or premises are distributed, area plans of a suitable scale, or some other description referencing the infrastructure in relation to the main or central facility will be required.

6.2 List of Other Facilities

Where the proponent or operator has active permission to operate under an Alternative Safety Approach, provide a listing of the establishments or facilities that these permissions relate to, and the names of those organizations to which they were issued. These may be sites other than the one(s) listed on this application.

6.3 General Premises Information

To help give the application some context, a description of the operations is required.[9] Although general in nature, this overview could include information on:

- The activities or primary operations at the premises
- Numbers and locations of people typically at the premises
- Other operations located on the same premises that may not be subject to the Safety Management Plan, including a general outline of the types of activities that occur there

[9] Alternative Safety Approaches regulation 8 (e) (i)

- The locations of roads, railways, or docks, entrances to the facility and any other feature that is relevant to the Safety Management Plan
- Matters relevant to emergency response such as firewater supply, essential utilities, escape routes and communication systems, and
- Location of key control systems or isolation systems.

6.4 Environment

A description[10] of the property and environment surrounding the premises as it relates to the hazard categorization of the Safety Management Plan application must be provided. When looking at the surroundings, there are three main factors to consider.

6.4.1 External factors that could contribute to, or cause a major accident

A clear description of all things that may contribute to a major accident in, around, over and below the premises is to be included; these features could include:

- geological formations (earthquakes),
- forests (fire),
- rivers (flooding)
- airports (crash of a plane at takeoff or landing)

6.4.2 The people, property or environment that could be impacted by a major accident

The receiving environment is the area within the zone of possible effect of a major accident where the people, property and natural features within that area are to be described; these features could include:

- Land uses (industrial, institutional, transportation routes, rural, agricultural etc.) including planned future uses (if known),
- Buildings and infrastructure (schools, hospitals, commercial/industrial sites, flight corridors, transportation corridors etc.), and their potential occupancy
- Infrastructure (water supply, buried gas lines, sewer systems, storm-water etc.), and
- Natural environment

6.4.3 External factors that could influence the impact of a major accident

The surrounding environment may influence the impact of a significant accident event; these features must be identified in the description, and if applicable, on the illustrations. These sorts of features may include:

- Topography (dispersion of airborne gases),
- Historical weather records,
- Surrounding watercourses including aquifers,

[10] As per Alternative Safety Approaches Regulation Div 3, section 8 (e) (ii)

- Tides and currents (dispersion), and
- Features that may affect emergency response.

These surrounding and receiving environments - both natural and man-made - can be illustrated with captioned photographs, satellite photos, and zoning maps or other suitable material set to a suitable scale (1:10 000, although multiple maps to multiple scales may be necessary when describing wide area effects). The exact nature of the submission is up to the applicant, but in all cases effort should be made to provide as clear a picture as possible for a timely and accurate assessment.

7.0 Safety Management Plan Hazard Category

7.1 Overview

A Safety Management Plan application must provide the hazard category rating, the methodology used to determine the hazard category, and the people involved in the hazard assessment.

7.2 Determination of Hazard Category

To determine the hazard category for the purposes of an application, the area affected as a result of the most consequential event resulting from a pure, unmitigated hazard or hazards must be identified. This area of effect is then evaluated to determine the potential impact to people and property.[11]

The evaluation performed as a part of the hazard assessment will then produce two findings; the total number of people that could be endangered, and the total value of property that could be endangered. The hazard category for the safety management plan is the higher category determined from the table below.

	Potential number of persons endangered	Potential value of property endangered
Category 1	**50 persons or less**	**$10,000,000 or less**
Category 2	**51 – 250 persons**	**$10,000,001 to $50,000,000**
Category 3	**More than 250 persons**	**More than $50,000,000**

[11] Property includes the natural environment

7.3 Methodology

Provide a brief rationale for the methodology used for the hazard assessment. This synopsis should be focused on demonstrating that the evaluation of the hazard(s) was done using a process that is fit-for-purpose. Where the identified hazards have limited consequences, the exercise undertaken to assess the hazards is not expected to be as rigorous as when the hazards are major with associated consequences potentially impacting many people and/or incurring significant property losses.

7.4 People involved in the exercise

A listing of the people involved in the hazard assessment, their names, titles, qualification(s), and their relationship to the proponent (e.g. employee, consultant, operator, contractor) must be provided in the application. If the named persons will also be part of the workforce who will be using the regulated product or undertaking regulated work, please identify them, and their level of participation.

8.0 Other Permissions

All applicants for Alternative Safety Approaches must detail other permissions that are in place for installation or operation of equipment at the establishment. If the proposed Safety Management Plan will affect or impact these existing permissions, the proposal must provide details of how these impacts will be addressed.

Examples of these may include:

- Safety Management Plan
- Equivalent Standard Agreement,
- operating permits, or
- incomplete installation permits.
- approved variances
- worker certificates of qualification

9.0 Proposed Development Timeframe

The B.C. Safety Authority requires that a submission date for an Alternative Safety Approach proposal be provided; this is to ensure that the B.C. Safety Authority can plan for workload, ensuring availability of all necessary resources to facilitate the assessment process and maintain agreed upon timelines. If a proponent has a planned date of starting operations under an accepted plan, please state that as well. Where a phased submission and implementation is envisioned, please provide details.

Note:

As the delegated authority in the Province of British Columbia to oversee provisions of the B.C. Safety Standards Act, information in the application may be subject to freedom of information requests. If you have questions about the collection, use or disclosure of this information, contact the Records, Information, and Privacy Analyst for the B.C. Safety Authority at telephone toll free 1-866-566-7233.