



Occurrence Classification Policy

Purpose

To establish the classes of transportation occurrences to be investigated (pursuant to Section 8(1)(b) of the *CTAISB Act*) and to set the criteria for investigations within each class.

Background

Approximately 4,000 transportation occurrences are reported to the TSB each year in accordance with its mandatory reporting requirements. Practical considerations dictate that only a small proportion of these be investigated. From time to time, a transportation disaster or a particularly troubling safety issue will warrant a public inquiry. Numerous occurrences warrant a TSB investigation in that they offer potential for acquiring new knowledge of the underlying safety deficiencies compromising safe transportation operations. But most reported occurrences by themselves offer little scope for adding to the Board's knowledge of the underlying safety deficiencies. However, a broad examination of sets of such occurrences involving similar phenomena or contributory factors is at times warranted.

Effective resource management and the advancement of transportation safety will depend upon the Board's timely identification of individual occurrences, as well as unsafe situations or conditions, with potential for significant safety payoff.

Factors Affecting the Occurrence Classification Policy

Resources

Sound management practice requires that the balance of resources be applied against expected transportation safety payoff, whether for individual investigations or for groups of investigations aimed at the resolution of significant safety issues. Given public expectations concerning government spending, the TSB's focus on safety benefit becomes even more important.

Obligations and Commitments

Canada is signatory to several international agreements pertaining to the conduct of investigations. In addition, the TSB is party to several less formal agreements for the provision of services to particular nations or provinces. The TSB strives to meet such obligations and commitments.

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Canadian Interests

Sometimes Canadian-manufactured transportation products, Canadian carriers, or large numbers of Canadian citizens travelling with foreign carriers are involved in major occurrences outside of Canada. The TSB must be prepared to provide a fair analysis of occurrences where Canadian products, services, or citizens are involved.

Public Expectation

Following spectacular or particularly tragic occurrences, there is a public expectation that action will be taken by the government to prevent recurrence. The TSB must endeavour to maintain public confidence that accidents in the federally regulated, national transportation system will be independently and competently investigated, regardless of the mode.

TSB Experience

In its first five years of operation, the Board carried out enough studies and other analyses of significant safety issues to determine that a larger portion of its efforts should be devoted to the identification of safety deficiencies through the analysis of other than single events.

Classification Criteria

The primary criterion for determining if an occurrence in any mode will be investigated is whether or not such analysis is likely to lead to a reduction of risk to persons, property, or the environment. (Considerations for the assessment of risk are outlined at Annex A.)

Other criteria include:

- Consideration of any TSB obligations or commitments under international agreements, assistance to the provinces or other nations, etc.
- Consideration of the degree of public expectation of a TSB investigation -- whether from a general public concern or concern for Canadian products, services, or citizens abroad.

Policy

Classes of Occurrences

The Board will focus its efforts on occurrences in the federally regulated, commercial transportation sector. Each transportation occurrence will be assigned to one of the following *Classes of Occurrences*:

Class 1 Occurrences (Public Inquiry)

When the Board deems it necessary, the Board will conduct public inquiries into transportation occurrences that it is investigating (be they accidents or incidents; or situations or conditions that, if left unattended, could induce an accident). In determining whether to conduct a public inquiry, the Board will consider the following:

- the potential for reducing the risk to persons, property, or the environment;
- whether an inquiry would uncover facts that might not otherwise be made known;
- whether an inquiry would result in quicker remedial action;
- the actual or potential extent of injuries and/or loss of life;
- the degree of public interest in and concern about public safety; or,
- the possible involvement of an arm of government.

Class 2 Occurrences (Individual Occurrence Investigation)

An individual occurrence shall be investigated when:

- A) there is a high probability of advancing Canadian transportation safety in that there is significant potential for reducing the risk to persons, property, or the environment; or
- B) the Governor in Council so requests (pursuant to Section 14(1) of the *CTAISB Act*).

Class 3 Occurrences (Individual Occurrence Investigation)

Individual occurrences that do not meet the criteria of Class 2 occurrences may be investigated when:

- A) there is significant public expectation that the TSB should independently make findings as to cause(s) and contributing factors; or
- B) there is potential for better understanding the latent unsafe conditions contributing to a significant safety issue; or
- C) a government representative so requests (pursuant to Section 14(2) of the *CTAISB Act*); or
- D) the Board must do so to meet its obligations or commitments.

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Class 4 Occurrences (Safety Issue Investigation)

Multiple occurrences, which the Board deems to be indicative of significant unsafe situations or conditions, will be subject to a safety issue investigation when:

- A) there is a high probability of advancing Canadian transportation safety by reducing the risk to persons, property, or the environment; or
- B) in the Board's opinion, there is widespread public expectation that the TSB should independently analyse a particular safety issue.

(Activities of this type will generally be based on a significant safety issue previously identified by the Board in consultation with the transportation community and the public.)

Class 5 Occurrences (Data Collection)

Data pertaining to occurrences that do not meet the criteria of classes 1 through 4 will be recorded in suitable scope and detail for possible safety analysis, statistical reporting, or archival purposes.

Notes

Generally, the Board will not participate in the investigation of foreign occurrences unless there is a high probability of advancing Canadian transportation safety; and, generally, it will not investigate industrial-type occurrences (i.e. those not directly related to the transportation aspects of operations).

An occurrence will not be classified until sufficient facts are available to assess the potential for safety payoff. This may require deployment to the occurrence site to evaluate physical evidence, reviewing documents, interviewing personnel or witnesses, etc. During this period, investigators may exercise the powers of an investigator established in the *CTAISB Act*.

When practicable, an individual occurrence will be classified within 72 hours of the initial occurrence notification. In general, an occurrence can be reclassified based on the perceived potential for significant safety outcome. However, no classified occurrence can be downgraded to Class 5.

The investigative response for each class of occurrence will be in accordance with standard operating procedures prescribed in the Manuals of Investigation Operations.

Annex A

Risk Assessment Considerations

If the general criteria apply, then, before the decision is made to investigate an occurrence, further analysis will be conducted using the risk assessment considerations that follow. These take into account the probability of future occurrences resulting in adverse consequences and the potential nature of those consequences.

In assessing the **Probability of Adverse Consequences**, the following sorts of considerations will be evaluated:

- Is there a history of occurrences like this one or is this an isolated occurrence?
- How many pieces of equipment or kilometers of pipeline are there that might have similar defects?
- How many operating or maintenance personnel are following or are subject to the practices or procedures in question?
- What percentage of the time is the suspect equipment or the questionable procedure or practice in use?
- To what extent are there organizational, management, or regulatory implications which might reflect larger systemic problems posing a threat to public safety?

In assessing the **Consequences of Occurrence**, consideration is given to such questions as:

- How many lives are at risk? Fare-paying passengers? Transportation employees? Bystanders or general public?
- What could be the extent of further property damage? Direct property loss to the operator? Damage to adjacent infrastructure? Third-party collateral damage?
- What could be the environmental impact? Dangerous commodity spill? Physical disruption of natural habitat?
- What is the potential impact on carriers? On commercial operations? Physical disruption of infrastructure? Corporate viability? Financial markets?
- What could be the public and media interpretation? What might be the political implications? Internationally? Nationally? Locally?

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Sometimes, although there is little doubt that an unsafe condition with unacceptable risk exists, the potential for further practical safety action is limited. Thus, in addition to assessing the risks, the potential for meaningful, timely safety action will be considered. To determine the potential **Safety Value** of an investigation or study, the following questions should be considered:

- To what extent are the related safety hazards already well known or being attended to?
- Could this occurrence shed new light on an old problem?
- Has the TSB identified this issue as one warranting extra attention? Board Safety Concern? Significant Safety Issue? Safety Study?