



2017 Minerva – CIAC Responsible Care Case Study Competition

Sponsored by [Minerva](#) and the [Chemistry Industry Association of Canada \(CIAC\)](#). Supported by [Waterloo Cases in Design Engineering](#) and the [Canadian Society for Chemical Engineering](#).

Overview

Engineering students registered at Canadian institutions are invited to enter the competition by preparing a written response to the case study. Three finalists will be selected and invited to present their solutions during the annual Canadian Chemical Engineering Conference.

Submission Rules

- The Chemical Institute of Canada shall send an invitation to all Canadian Engineering Schools to participate in this case study competition sometime in August or early September. The invitation shall include the case study, deadline date for submissions, and the rules and regulations. Submissions will be e-mailed to awards@cheminst.ca.
- All files must be in PDF format. Filenames should include the institution name or initials.
- Each engineering program can submit a maximum of one response to the case study. If a program receives more than one response, selection of the competition entry is at that program's discretion.
- The response should consist of:
 - A title page (not counted towards the five-page limit) including the names of the students, their institution, their e-mail addresses, program and year of study, and a contact mailing address.
 - A technical response to the case study of maximum five pages (minimum 12 point font, single-spaced paragraphs with double spacing between paragraphs, as in this document).
 - A list of references cited in the technical response (not counted towards the five-page limit).
 - Appendices (not counted towards the five-page limit) including drawings (maximum 11×17 page size) and other supporting information, calculations, etc. Note that all appendices must be referred to in the main report. There is no limit to the number or length of supplied appendices.
- Three finalists will be selected from the responses received. Finalists will be invited to present at the Canadian Society for Chemical Engineering's annual conference. Winners will be selected based on these presentations.

Prizes

- Three prizes will be awarded of \$1,000 (1st place), \$500 (2nd) and \$250 (3rd).

Eligibility

- Responses to the case study are made by teams of 1 to 4 members.
- Each member of the team must be a currently registered undergraduate student in an engineering program at a Canadian institution. Students on cooperative work terms or equivalent **are** considered eligible to enter.

Judging

- A panel of judges (up to four judges selected by Minerva) will review all the responses and select three finalists.
- The finalists will present their case studies during the Canadian Chemical Engineering Conference. Only members of the submitting team can present the response.
- A panel of judges will rank the finalists based on the presentations. Note that the judges of the presentation may be different to those of the initial submissions.
- The winning team will be announced during the student banquet at the Chemical Engineering Conference.



Judging Criteria

- Finalists and winners will be selected based on the criteria below.
- For criteria 1 and 2, judges may elect take into account the level of the team members.

Criterion	Weight
Technical analysis: demonstrated technical understanding of the situation, development of suitable design options for response, selection and application of appropriate analysis tools for safety assessment	60%
Conclusions and recommendations: appropriate conclusions and recommendations, based on the technical analysis performed	20%
Communication and Report: professional report layout and format, appropriate use of appendices, citations, clarity and style of communication	20%

Response Guidelines

- Your response should address the problem statement provided in the case study. No further information will be provided. Clearly state any assumptions necessary for preparing your response. Your response should include an analysis of the situation, identification of different options and recommendations on what course of action the company should take.
- Your response is expected to be based on a technical analysis of the situation. There are a variety of techniques and tools available to conduct such analyses and it is up to your team to select and apply a suitable method.
- Assume that the reader of your report is a technical manager at the company. You can assume that this person is familiar with the general process and operations at the company, but is not familiar with the specific incidents. You may cite the case study as appropriate in your response.
- Format your document as a technical report that is suitable for a professional environment (this will guide in terms of layout, font, etc.).

Selected Resources

- The Process Safety Management division of the Canadian Society for Chemical Engineering: <http://www.cheminst.ca/psm>
- Minerva Canada: <http://www.safetymanagementeducation.com/>
- Other resources: your coursework, coop work term employment and library may all provide appropriate resources.