



Design and Siting of Facilities

Friday March 12, 2010

Livingston Place Conference Centre

Plus 15 Level, 222-3rd Ave SW, Calgary, Alberta

The Canadian Society for Chemical Engineering (CSCHE) and Baker Engineering and Risk Consultants, Inc. (BakerRisk) have organised a workshop on the design and siting of fixed and portable process plant buildings. The agenda below gives a short summary of each of the key presentations.

Topic	Time
Arrival & Registration	08:30
Welcome and Administrative Details, PSM Division Chair David Guss	09:00
Introduction to Industry Standards - Ray Bennett The standards developed and adopted in the United States will be introduced along with a short history of their evolution. A comparison of standards for permanent versus temporary buildings will also be provided.	09:30
Siting Requirements for Permanent and Portable Buildings - Ray Bennett The requirements of the American Petroleum Institute (API) Recommended Practice RP-753 (Siting of Temporary Buildings) and the pending revision of API RP-752 (Siting of Permanent Buildings) will be discussed in detail. The siting of portable buildings has specific limitations on the personnel who may be allowed in these buildings and minimum standoff distances for some types of portable buildings. The siting of permanent buildings may be performed using either a risk based or consequence based approach; however the document has specific limitations on both approaches.	10:00
Lunch & Industry Panel Discussion – Panel Participants TBD	12:00
Understanding Explosions - Adrian Pierorazio The session will discuss the different types of explosions and methods for assessing the severity of the explosion. Vapour Cloud Explosions will be the center of the discussion with information presented on how to assess the levels of fuel reactivity, congestion, and confinement. The interaction of explosion scenarios with fire and toxic scenarios will also be addressed.	13:30
Structural Response of Buildings - Ray Bennett The response of structures to blast loads will be discussed as will correlations between building damage and occupant vulnerability. Various models for predicting blast damage will be addressed as will different response criteria.	14:30
Consequence Modeling & Risk Analysis - Adrian Pierorazio This session will describe the components and development of both consequence and risk based analyses and the effective identification and evaluation of improvements from the study results.	15:30
Summary and Panel Discussion	16:30
Finish	17:00



About the Instructors

Adrian Pierorazio, P.Eng.

Adrian Pierorazio is a Principal Engineer and the Canadian Operations Manager for BakerRisk. He has been involved in numerous siting and hazard analysis projects in Canada and abroad and has over 15 years of experience in consequence modelling, incident investigation, methodology development, and applied explosion research. Mr. Pierorazio was one of the lead authors of the recently published CCPS book *Guidelines for Estimating Vapor Cloud Explosion, Pressure Vessel Burst, BLEVE and Flash Fire Hazards, 2ed* and currently serves on the executive of the CSCHE PSM Division, the CSA A279 Technical Committee (Blast Resistant Buildings), and Professional Engineers Ontario (Oakville). Mr. Pierorazio is a Designated Consulting Engineer in Ontario, is a P.Eng. in four provinces, and is a Certified Fire and Explosion Investigator.

Ray Bennett, Ph.D. PE

Dr. Bennett has over 30 years of professional experience in the assessment and design of structures to resist the effects of accidental and deliberate explosions. He has provided research and consulting services to private sector and industrial clients throughout his career. He was a member of the American Petroleum Institute (API) committee that recently published API RP 752, Management of Hazards Associate with Location of Process Plant Permanent Buildings, and API RP 753, Management of Hazards Associated with Location of Process plant Portable Buildings. His projects include the response of equipment to blast and shock loadings at refineries and petrochemical plants, and the response of modular structures to blast and shock loadings. He has performed similar studies for industry, US Department of Energy, US Department of Defence, and US General Services Administration.

Registration Information:

Fee: \$150 pp full day, includes lunch and refreshments
\$100 pp half day
Discounted rates are available for groups of 3 or more.

Contact: Cindy Sharlow
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For further information about this workshop, please contact:

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