

Biographical Information

Name: Gerry Phillips
Title: Senior Consultant,
Address: GC Phillips Consulting Ltd
3851 Eastwood Close
Red Deer, Alberta, Canada
T4N 2W2

Education:

1970-B.Sc. (Chem. Eng.) from the University of Saskatchewan
1971-B.Sc. (Chemistry) from the University of Saskatchewan
1979-MASc. (Chem. Eng.) from the University of Waterloo

Employment:

2007 to Present – GC Phillips Consulting Ltd – Consultant

1996 to 2007 - NOVA Chemicals Corporation – Internal Consultant (Retired)

2003 to 2007 – Leader – Process Safety & Risk Management responsible for the Process Safety Technology Team, Loss Prevention Engineering, Process Safety Management, and Risk Assessment for the twelve operating facilities, the research facilities, and the pipelines operated by the Corporation.

1996 to 2003 - Senior Loss Prevention Engineer responsible for Loss Prevention Engineering, Process Safety Management, and Risk Assessment for the eighteen operating facilities, the research facilities, and the pipelines owned by the Corporation.

1979 to 1996 - Alberta Gas Ethylene Co and Novacor Chemicals - Joffre Site

1984 to 1996 - Site Safety Engineer responsible for making recommendations to senior management regarding safety engineering practices and providing expertise in Quantitative Risk Assessment to Nova Corporate.

1981 to 1984 - Process Supervisor responsible for day-to-day operations in the Utilities Area and the Cracking Area.

1979 to 1981 - Process Engineer responsible for process development, troubleshooting, and monitoring of the Cracking Area.

1973 to 1979 - DuPont of Canada - Ontario

1975 to 1979 - Process Engineer at the Corunna site responsible for process development, troubleshooting, and monitoring of the Distillation and Utilities areas.

1973 to 1975 - Production Engineer at the North Bay plant responsible for design reviews, commissioning, and startup of a \$10 million explosives expansion.

1971 to 1973 - Diener Controls Ltd - Saskatoon, Saskatchewan

Engineer responsible for development, production and marketing of a new product

Other Professional Activities:

- Fellow of the Chemical Institute of Canada (CIC), 2007 to present
- Co-Chairman for AIChE LNG Workshop #2 in Houston, 2007
- Member of Association of Professional Engineers, Geologists, and Geophysicists of Alberta (APEGGA), 1979 to present
- Member of American Institute of Chemical Engineers (AIChE), 1992 to present
- Member of Canadian Society for Chemical Engineering (CSCHE), 1967 to present
- Member of MIACC Experts Group on Risk Assessment, 1989 to present on behalf of the Canadian Chemical Producers Association (CCPA)
- Vice-President, President, Past-President of CSCHE, 2003-2006
- Advisory Committee Member for the University of Alberta Industrial Safety Loss Management Program, 1995–2006
- Organizing committee for LNG Workshop, Vancouver, September 2005
- Canadian Representative on the OECD Steering Group for Risk Assessment Related to Chemical Accidents, 1996–2003 representing Environment Canada
- Member of the Canadian Society of Safety Engineers (CSSE), 1985-2003
- Director for Industrial Focus of CSCHE, 1999-2002
- Chairman of the Process Safety Loss Management Symposium, 2001
- Chairman of the Red Deer Safe Community Project, 1993–2000
- Technical Advisor for Petroleum Industry Training Services High Vapour Pressure Training Course, 1993–2000
- Member of the Executive Committee of the Red Deer Safe Community Project, 1988–2000
- Member of the MIACC Technical Management Committee, 1997–1999
- Chairman of the CCPA Process Safety Management Committee, 1993–1997
- Member of the Advisory Board for the University of Alberta Occupational Health and Safety Certificate Program, 1992–1997
- Treasurer of CSSE (Alberta), 1990-1997
- Member of the AIChE Center for Chemical Process Safety Committee, Project 61 - Guidelines for Auditing Process Safety Management, 1991–1998
- Chairman of the Central Alberta Chapter of CSSE, 1990
- Professional Development Chairman for the 28th CSCHE Conference, Sarnia, ON,

1977-1978

- Program Director for Sarnia Chapter CSChE, 1977-79

Public Service:

- Chairperson of the Safety City subcommittee, 1993–1998
- Member of the Board of Kerry Wood Nature Centre Association and Member/Chairman of the Normandeau Cultural and Natural History Society, 1992–1997
- Member of the Mayor's Task Force on Dangerous Goods Occupancy Zoning, 1989–1990
- Member of the Red Deer Museums Management Board, 1983–1987 - Chairman for 1986 and 1987
- President of the Red Deer Five Pin Bowlers' Association, 1982
- Member of the Fort Normandeau Management Board, 1980-1981

Honours and Awards:

- CCPA President's Award for Contribution to advancing Process Safety Management in Canada – 2007
- Fellowship in the Chemical Institute of Canada.
- PSM Award – CSChE Process Safety Management Subject Division, 2005
- Stollery Executive in Residence for the University of Alberta Industrial Safety/Loss Management Program, 2000
- NOVA Distinguished Applause Award for Community Service for providing the leadership to establish Safety City in Red Deer, 1999
- CCPA Award of Merit for Contribution to advancing Process Safety Management in Canada – 1997

Contributions to Teaching, Mentoring and Public Awareness:

- Guest lecturer at University of Alberta and University of Calgary in the areas of Process Safety and Risk Assessment, 1987, 1998–2002
- Mentored several young professionals to prepare and present papers at international conferences in the area of Process Safety Management and Loss Prevention
- Provided technical guidance regarding Consequence Modeling for the Mayor's Task Force on Dangerous Goods Occupancy, 1988
- Founding member of Red Deer's Safe Community Project (1987) and Safety City (1991)

Most Outstanding Achievements:

- Establishing the Process Safety Management Subject Division and the annual PSM Symposium. This is significant because there was no national forum for PSM in Canada following the demise of the Major Industrial Accidents Council of Canada (MIACC).
- Establishing Red Deer's Dangerous Goods Occupancy By-law in 1989. This was the first bylaw in Canada to recognize the need to control dangerous goods through Land Use Planning and continuous monitoring.
- Establishing management systems for the Red Deer and District Museum, Kerry Wood Nature Centre, and Fort Normandeau. These systems formed a basis for the ongoing success of these facilities.
- Ensuring that Guidelines for Risk Assessment for Municipalities and Industries – An Initial Screening Tool was published by acting as the final editor. This document laid out acceptable Public Risk Criteria for Canada.
- Establishing a procedure for on-line decoking of ethylene cracking furnaces. Previous attempts in other companies had been unsuccessful; the change resulted in significant improvements and profitability for NOVA in excess of \$20 million per year.

Scientific and Technical Contributions:

- Ongoing Peer Reviewer for papers dealing with Risk Assessment for the Canadian Journal of Chemical Engineering, The Journal of Hazardous Materials, and the Journal of Loss Prevention in the Process Industries.

Refereed Papers:

- Henselwood, F.W., and Phillips, K.G., (2008) The Development of Risk Criteria for High Severity Low Frequency Events, Published online December 31, 2008 in Wiley InterScience (www.interscience.wiley.com). DOI 10.1002/prs.10279.
- Henselwood, F.W., and Phillips, K.G., (2006) A Matrix-Based Risk Assessment Approach for Addressing Linear Hazards such as Pipelines, Journal of Loss Prevention in the Process Industries, Volume 19, Issue 5, PP 433-441.
- Phillips, K.G., Henselwood, F.W. (1991) A discussion of the detonation potential of ethylene vapor clouds. In: Cunningham, J. (ed.) International Conference on Modeling and Mitigating the Consequences of Accidental Releases of Hazardous Materials, New Orleans, Louisiana, May 1991. Chicago: American Institute of Chemical Engineers, 1991.

Contributions to Books and Manuals:

- Phillips, G., & Wilson, L., Chapter 7 - Risk Assessment, Analysis and Management, including all Major Techniques, In: Wilson, L., McCutcheon, D. (ed.), Industrial Safety and Risk Management, Faculty of Engineering, University of Alberta, 2004.
- Process Safety Management Guide, Canadian Society for Chemical Engineering, 3rd Edition, 2002.
- Risk Assessment - Recommended Practices for Municipalities and Industries, Canadian Society for Chemical Engineering, 2000.
- Risk Assessment Guidelines for Municipalities and Industries - An Initial Screening Tool, Major Industrial Accidents Council of Canada, Ottawa, ON, 1995.
- Guidelines for Auditing Process Safety Management Systems, Center for Chemical Process Safety, New York, American Institute of Chemical Engineers, 1993.

Presentations, Papers, Reports:

- Fred Henselwood and K. Gerry Phillips, (2008) Managing the Intolerable, 10th Process Plant Safety Symposium (PPSS), AIChE Spring National Meeting, New Orleans, LA, 2008
- Henselwood F.W., Phillips K.G. (2007) Managing the Intolerable, PSM Symposium at the 57th CSChE Conference, Edmonton, AB, October 28th–31st.
- Phillips K.G. and D.A. Young, (2006) Managing the Consequences of Dangerous Goods Occupancies in Red Deer, PSM Symposium at the 56th CSChE Conference, Sherbrooke, QC, October 15th–18th.
- Phillips, K.G., (2005) Understanding, and Applying the Science: A Case Study in Eliminating Process Fires, Keynote address to the PSM Symposium at the 55th CSChE Conference, Toronto, ON, October 16th–19th.
- Phillips, K.G., (2005) The Responsibility of Chemical Engineers to Society, Keynote address to Lakehead University Students' Conference, Thunder Bay, ON, March 26th.
- Phillips, K.G., (2004) The CSChE's Role in PSM, Volume 56, No. 2, Canadian Chemical News/L'Actualite chimiq Canadiene (ACCN), Chemical Institute of Canada, Ottawa, ON, February, 2004.
- Phillips, K.G., (2004) Implementing Process Safety Management to Prevent Major Incidents, Presented to the CEPA Workshop, Toronto, ON, February 24th and Edmonton, AB, March 2nd, 2004.
- Phillips, K.G., (2004) "The Changing Environment", President's Address to the 54th CSChE Conference Banquet, October 5th, 2004.
- Phillips, K.G., (2003) Basing Loss Prevention Recommendations on Risk, Presented to the 53rd CSChE Conference, Hamilton, ON, October 26th–29th.

- Phillips, K.G., (2002) NOVA Chemicals Risk Assessment Methodologies, ISLMP Lecture, University of Alberta, April 2002.
- Phillips, K.G., (2002) Extending the Application of CARAT to Planning and Analysis, Presented to the 52nd CSChE Conference, Vancouver, BC, October 20th-23rd.
- Phillips, K.G., (2001) Practical Application of Foam-Water Deluge in a Petrochemical Facility, Presented to the 51st CSChE Conference, Halifax, NS, October 14th–17th.
- Phillips, K.G., (2001) CARAT - An Operational Approach to Risk Assessment Definitions, Processes and Studies, Presented to the 51st CSChE Conference, Halifax, NS, October 14th–17th.
- Phillips, K.G., (2001) Focus and Training - Key Components of Planned General Inspections, Presented to the OECD Workshop on Audits and Inspections, Madrid, Spain, March 6th.
- Phillips, K.G., (2000) Reduce Incidents by Maintaining Operating Procedures, Presented to the PSLM2000 Symposium, Calgary, AB, November 6th–8th.
- Phillips, K.G., (2000) NOVA Chemicals Approach to Safety in Design, Presented to the Fourth Annual Pressure Equipment Industry Conference, Banff, Alberta, February 2nd– 4th.
- Phillips, K.G., (1999) Management of Change, Presented to MIACC Safer Communities Workshop, Toronto, Ontario, October 20th.
- Phillips, K.G., (1999) Auditing Process Safety Management, Presented to the Canadian Environmental Auditing Association Conference, Toronto, ON, October.
- Phillips, K.G., (1996) Management Review of Williams and Paslawski, In: Technical Risk Issues in Business and Regulatory Decision-Making Proceedings of a Colloquium held in Calgary, AB, September 19-20, 1996, Del Bel Belluz, D and J.Shortreed (Ed.), Institute for Risk Research, U. of Waterloo, Waterloo, ON.
- Phillips, K.G., (1995) Reduce Incidents by Maintaining Operating Procedures, Presented to the OECD Workshop on Risk Assessment and Risk Communication in the Context of Accident Prevention, Preparedness and Response, Paris, France, July 11th-14th.
- Phillips, K.G., (1995) Plant Approaches to Risk Assessment, Presented to the OECD Workshop on Risk Assessment and Risk Communication in the Context of Accident Prevention, Preparedness and Response, Paris, France, July 11th-14th.
- Phillips, K.G., (1994) Wilson, L., Overview: An Integrated Approach for Process Safety and Loss Management, Presented to the PSLM Symposium, Toronto, ON, Oct.
- Phillips, K.G., (1993) Shives, J., Application of MIACC Risk Assessment Methodology to Municipal and Industrial Sites, Proceedings of the First Biennial Canadian Conference on Process Safety and Loss Management, Edmonton, AB, April 22nd-24th.

- Phillips, K.G., (1991) Workshop on Developing Safety System Impairment Guidelines, Presented to The Canadian Society of Safety Engineering (AB) Professional Development Conference, Banff, AB, November 14th-17th.
- Phillips, K.G., (1991) Engineering Fundamentals in Inert Gas Purging, Presented to The Canadian Society of Safety Engineering (AB) Professional Development Conference, Banff, AB, November 14th-17th.
- Phillips, K.G., (1990) Workshop on Vapour Clouds and Vapour Cloud Explosions, Presented to The Canadian Society of Safety Engineering (AB) Professional Development Conference, Banff, AB, October 18th-21st.
- Phillips, K.G., (1990) Safety Engineering Aspects of Hot Tapping, Presented to The Canadian Society of Safety Engineering (AB) Professional Development Conference, Banff, AB, October 18th-21st.
- Phillips, K.G., (1990) Elements of an Effective Process Safety Program, Presented to NOVA Corporation Health, Safety, and Environment Conference, Kananaskis, AB, November 6th.
- Creedy, G.D., Shrives, J.S., Phillips, G., (2004) Major Hazard Control in Canada: A Change in the Regulatory Landscape, In: Proceedings of CCPS 2004 International Conference on Emergency Planning, Preparedness, Prevention, and Response, Orlando, FL, June 29th-July 1st.
- Henselwood, F.W., Phillips, K.G., (2007) Managing the Intolerable, Presented to the CSChE Conference, Edmonton, AB, October 28-31st.
- Henselwood, F.W., Phillips, K.G., (2004) A Matrix-Based Risk Assessment Approach for Addressing Linear Hazards such as Pipelines, Presented to the CSChE Conference, Calgary, AB, October 3rd-6th.
- McCutcheon, D., Schreiber, S., Makris, J., Sackney, O., & Phillips, G., (1995) Modern Process Management: The Center for Chemical Process Safety (CCPS) Approach, In: Robinson, C., Wilson, L. (ED.), Process Safety and Loss Management: Proceedings of the First Biennial Conference 1993, Institute for Risk Research, University of Waterloo, Waterloo, ON.
- Nibber, S.P.S., McPhail, M.R., & Phillips, K.G., (2001) Hazard Awareness Training in Managing Operational Risks, Presented to the 51st CSChE Conference, Halifax, NS, October 14th-17th.