

Resume of Neil McCubbin



Citizenship Canadian and British

Languages English, French, some Spanish and German

Education B.Sc. (Eng.) 1st Class Hons.
University of Glasgow, Scotland, 1964
Associate of the Royal College of Science and
Technology, Glasgow.

Membership PAPTAC Environment Committee
TAPPI Process Simulation Committee
Registered Professional Engineer in Quebec

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Since immigrating to Canada from Scotland in 1965, Neil McCubbin his professional activities have been almost entirely related to pulp and paper industry. Initially, he worked in mills and later as a consultant to various interested parties in Canada and overseas. In the earlier stages of his career he worked on detail design of pulp production, pollution prevention and effluent treatment systems. Latterly he has concentrated on process and environmental studies. Many of these have included assistance in resolving conflicting environmental issues and reaching consensus amongst management of the pulp and paper industry, environmental advocacy groups, and regulatory agencies.

Typical assignments completed are described below

Legal and quasi-legal assignments

Technical support and advice to plaintiff's counsel on litigation by Ester Johnson vs International Paper Company, concerning wastewater discharges from the company's pulp and paper mill in Pensacola, FL. (Levn, Papantonio..., Pensacola, FL)

Technical support to Altamaha Riverkeepers in negotiations with Rayonier Inc, Jesup, Georgia on reducing the color of the mill effluent discharge (Georgia Center for Law in the Public Interest)

Expert witness for Natural Resources Council of Maine, contesting an effluent discharge permit issued to International Paper Company.

Technical support to the Commission for Environmental Cooperation (a NAFTA Commission) in developing a factual record in response to a submission by several environmental advocacy groups which asserted that Canada had not effectively enforced effluent control regulations in Eastern Provinces. (CEC, Montreal)

Advice to counsel and provision of expert testimony in the case of Vermont vs. International Paper Company at Ticonderoga, New York. This case was tried before a special master of the US Supreme Court. N. McCubbin was responsible for all air pollution aspects of Vermont's case. The litigation was spread over several years with total legal and engineering/scientific services fees of several million dollars. (State of Vermont, Montpelier, Vermont)

Technical support for Environment Canada in investigation of a mill over alleged infringements of the Pulp and Paper Effluent Regulations. (Environment Canada, Montreal)

Advice to counsel in Gateway Industries vs. Crown. Defense of charges of infringement of Pulp and Paper Effluent Regulations. (Gateway Industries, Winnipeg, Manitoba)

Assistance to Lerner David, (Attorneys for Union Camp Corp) in litigation over patent rights to ozone delignification technology.

Advice on resolution of dispute over warranty claims for new boiler in paper mill. (Confidential client)

Independent review of application for effluent and atmospheric emission permits for the Organosolv pulp mill proposed by Alcell Technologies in Atholville New Brunswick. (Alcell Technologies)

Environmental regulatory agencies

Advice to investigator and counsel for Environment Canada, vs Tembec Inc. (Environment Canada, Montreal)

Member of a three man Scientific Review Panel to advise the Minister of Water, Lands and Parks of British Columbia in regulation of AOX discharges from the 13 kraft mills, and one sulphite mill, in the Province. Project included review by public, and response to comments in public meeting. (BC Ministry of WLAP, 2002)

Engineering member of a three man "Expert Committee" to study effluents from 18 "non-kraft" mills in Ontario, recommend control regulations and evaluate the economic impact of such regulations. (Ontario Ministry of the Environment, Toronto)

Engineering member of "Kraft Mill Expert Committee" to study kraft mill effluents, recommend control regulations and evaluate the economic impact of such regulations. (Ontario Ministry of the Environment, Toronto)

Evaluation of consultants reports on the capabilities of the environmental protection systems for a proposed greenfield market kraft mill in Athabasca, Alberta. (Alberta Pacific Scientific Review Board, Edmonton)

Participation in review panel and public meetings for Alberta Pacific Forest Industries new kraft mill at Boyle, Alberta. (AIPac, Boyle, Alberta)

Review of technology and costs for control of phosphorus and BOD discharges from three integrated bleached kraft mills by internal upgrades and effluent treatment. The objective was to assist a broadly based stakeholder group in arriving at a consensus on new effluent discharge limits. (State of Maine, Department of Environmental Protection, Augusta, ME, USA)

Review of technology available for reducing dioxin discharges from bleached kraft mills to levels substantially below those defined in EPA and Canadian regulations. (State of Maine, Department of Environmental Protection, Augusta, ME, USA)

Analysis of problems of tainting of fish in the Kitimat River, caused by an unbleached kraft mill. Analysis of mill operations and development or mitigating measures. Report for the Kitimat Taint Management Committee, which includes industry, aboriginal peoples, and regulatory agencies. (Environment Canada, Ottawa and Vancouver)

Technical support and development of cost model for US Environmental Protection Agency's proposed regulatory update for effluents from US bleached chemical pulp and paper mills, and also mills processing recycled fiber. Defined alternative pollution prevention technology, developed simulation of process alternatives and a mathematical model to estimate costs of applying various technologies to each of the 86 bleached kraft mills in the US, assisted in writing technical support documents, analysis of several controversial issues related to cost and technical feasibility of alternate regulatory scenarios. Assistance to EPA in responding to comments by public. Included technical co-ordination with concurrent development of regulations for atmospheric emissions from the industry. (sub-contract Eastern Research Group, Washington, DC. Repeated assignments over an 11 year period)

Assessment of environmental impact of ammonium base sulphite at Tartas, France. (Ministère de l'environnement, Paris)

Assessment of technical feasibility and economic impact of proposed 1992 Federal Regulations for the pulp and paper industry. This project included calculating the capital and operating cost of the primary and secondary effluent treatment systems which would be required for each of the 115 Canadian mills affected to comply with the proposed regulations. An economic analysis of the combined effects of proposed regulation of AOX, dioxins, TSS, BOD and toxicity for the all kraft and bleached sulphite mills was also included. (Environment Canada, Hull)

Review of pulp and paper section of a report on alternatives to use of chlorine in Canada. (Consortium of Federal and Provincial environmental authorities)

Definition of Best Available Technology for controlling effluent discharges from pulp and paper mills. The project included estimating capital and operating costs of applying these technologies to the 27 mills in Ontario in 1991. (Ontario Ministry of Environment, Toronto, Ontario) Further assignment to update study in 1999.

Member of panel of engineers, toxicologists and other scientists convened by the Ontario Ministry of the Environment to advise on whether the Province should pursue a ten year old commitment to require the pulp industry to eliminate discharges of chlorinated organics by 2002. The panel included representatives of the industry, chemical suppliers and academia. (Ontario MoE, 2001)

Review and comment on regulatory development procedures and practices relative to the pulp and paper industry (Auditor General of Canada)

Technical support for confidential analysis of regulatory issues. (Auditor General of Canada)

Technical support to consultant preparing a manual on enforcement of water pollution control regulations for regulators dealing with the pulp and paper industry in the US. (Eastern Research Group, Lexington, Mass., EPA contract)

Training

Neil McCubbin has presented a number of short courses for engineers in the pulp and paper industry, and has also participated as an instructor in courses run by others. Courses were typically 2 to 5 days long. Examples include:

Preparation and presentation of one-day seminars on process closure technology for mill engineers in Melbourne Australia and in Rotorua, New Zealand.

Preparation and presentation of short course on pollution prevention in the pulp and paper industry for Environmental Regulatory Agencies in the State of Bahia, Brazil. (CRA, Salvador, Brazil)

Preparation and presentation of short course on pollution prevention in the pulp and paper industry to engineers in Morocco. (US Agency for International Development)

Course Leader and Lecturer in CPPA Environment Course 1990 and 1992. Short course in environmental protection technology for pulp mill engineers. (Canadian Pulp and Paper Association, Toronto and Edmonton)

Course Leader and Lecturer in CPPA Energy Course 1983 and 1986. Short course in energy conservation technology for pulp mill engineers. (Canadian Pulp and Paper Association, Montebello, Québec and Saint John, NB)

Energy conservation course for group of kraft mills in Price George, BC (PG Pulp and Paper, 1984)

Training engineers in use of process simulation software in a number of mills and consulting firms including Produits Forestiers Alliance, Dolbeau, Que., Papier Cascades Inc., Kingsey Falls, Que., NLK Vancouver, Dick Engineering, Toronto, ITT Rayonier, Jesup, Georgia; Thames Board, Workington, England; and QUNO, Thorold, Ontario.

Invited lecturer in CPPA Bleaching Courses 1995, 1997 and 1998. Short courses in bleaching for pulp mill engineers. (Canadian Pulp and Paper Association, various Canadian locations)

Invited lecturer in CPPA Mill Closure Course 1997. Short course in design of closed cycle pulp and paper mills for experienced engineers in the industry. (Canadian Pulp and Paper Association, Montreal)

Invited lecturer in three Kraft Mill Closure courses (1998, 1999 and 2002). Short course in reduction of kraft mill effluent discharges by using modern process closure technology, for engineers experienced in the industry. (Technical Association of the Pulp and Paper Industry)

Preparation of reports on the "Basic Technology of the Pulp and Paper Industry and its Environmental Protection Practices" and "State of the Art of the Pulp and Paper Industry and its Environmental Protection Practices". The report won a "Distinguished" award from the Society for Technical Communications. Several short courses were presented based on these manuals. (Government of Canada, Environmental Protection Service)

Miscellaneous assignments

Invited by the Australian Pulp and Paper Technical Association (Appita) on tour of 15 pulp and paper mills in Australia and New Zealand to speak to industry management on environmental and process closure issues. Also presented two one-day seminars on process closure and addressed two Appita section meetings. (Appita, Melbourne)

Assessment of the technological level of the US pulp and paper industry and suppliers of technology to the industry, with respect to pollution prevention. (Office of Technology Assessment, US Congress)

Member of team developing methodology for application of Life Cycle Analysis techniques to pulp and paper manufacturing operations for Canadian Standards Association. (sub to Jacques Whitford, Toronto)

Preparation of brief criticizing the criteria proposed by the European Union Commission for award of Eco-labels for paper products in the European Community. (Canadian Pulp and Paper Association, Montreal)

Review of a technical and market analysis for new bleaching technology. (Confidential client)

Analysis of technical and scientific aspects of proposed criteria for award of an Eco-Logo for pulp and paper products. (Environmental Choice Program, Ottawa)

Analysis of effluent data from nine pulp mills in Alberta and Northern BC, including development of software to facilitate access to database by researchers. (Northern River Basins Study Board, Edmonton, Alberta)

Engineering studies and design

Development of plan to minimize effects of recycled board mill on receiving water by a combination of process upgrades and effluent treatment in a recycled board mill. (Petrocart, Piatra – Neamt, Romania)

Process design and equipment specifications for in-plant pollution prevention measures and effluent treatment system for kraft linerboard mill at Puerto Piray, Argentina. This included assisting local engineers in the detail design phase. (SNC-Rust, Montreal)

Technical assistance to owner's design group developing process concept and basic design for a new 750,000 tpy mill in Brazil. (Veracel Cellulose SA, Sao Paulo, Brazil)

Process studies and equipment selection for effluent treatment systems for several mills including Cellulose du Rhone, Tarascon, Procter and Gamble, Grande Prairie, Alberta, Boise Cascade, International Falls, Minn., and Irving Pulp and Paper, Saint John, NB.

Computer simulation of the processes of a number of mills including Rayonier, Jesup, Georgia; *Thames Board, Workington, England; *Consolidated Bathurst, Shawinigan, Quebec; *Consolidated Bathurst, Bathurst, New Brunswick; Boise Cascade, Kenora, Ontario; *QUNO, Thorold, Ontario; *St. Regis Paper, Sudbrook, Wales, *F. F. Soucy, Riviere du Loup, Que., Consolidated Paper, Wisconsin Rapids, Wisc., and advice to a number of mills and consulting firms on the use of process simulation. The purpose of these projects was to improve process operations, to reduce effluent and energy losses. In all cases, it was necessary to spend several weeks in the mills concerned to document the process operations in detail, in addition to the simulation work itself.

Environmental risk analysis of current operations and recommendations on modifications to Baikalsk Pulp and Paper Co. dissolving kraft pulp mill to minimize environmental impact. The mill is located on Lake Baikal in Siberia, which is a unique body of water, and requires exceptional protection measures be implemented in the mill. (UNIDO, Vienna)

Analysis of environmental risks and predicted costs for two bleached kraft mills as part of preparation of prospectus for a public offering of shares in a spin-off company from Kimberly Clark Corporation.. (Tory and Tory, Toronto)

Review of reports on alternatives for chlorine bleaching. (Beak Consultants, Toronto, and Teltech, Minneapolis)

Assess the technical and economic feasibility of expanding recovery boilers in the Canadian kraft pulp industry to assist mills in complying with proposed organochlorine regulations. (Industry, Science and Technology Canada, Ottawa)

Review and appraisal of the alternate means of complying with the long term government objectives for the aqueous discharges from a sulphite pulp mill. (Kruger Inc., Trois Rivières, Quebec)

Development of short and medium term plan for compliance with current and proposed regulations on effluent for an integrated TMP and newsprint mill. (Kruger Inc., Bromptonville, Quebec)

Design for pulp washing, black liquor evaporation and strong liquor sales system for two very small kraft mills. These projects utilized conventional kraft recovery technology adapted to the local conditions to reduce BOD discharges. (Bolloré, Troyes and JOB, St-Girons, France)

Analysis of technical and economic feasibility of application of ozone bleaching in kraft mills. The purpose was to assist manufacturers of chemicals competing with ozone to assess future market developments. (CEFIC. Association of European Chemical Manufacturers)

Air pollution issues

Assessment of the atmospheric emissions from a group of seven pulp and paper mills, recommendations on control technology for current and predicted regulations and the preparation of order of magnitude capital cost estimates. Projects included analyses of the dispersion of the atmospheric emissions using various computer models. (Consolidated Bathurst, Head Office, Montreal, Quebec)

Study of operating electrostatic precipitator which had never attained design efficiency. This resulted in a low cost solution to the problem and the publication of a paper which won the Douglas Jones Award for the best environmental paper presented at CPPA meetings that year. (Consolidated Bathurst, New Richmond, Quebec)

Evaluation of air pollution dispersion models. (Environment Canada, Ottawa)

Simulation of dispersion of atmospheric pollutants for several mills including Corner Brook Pulp & Paper, Corner Brook, Newfoundland, Western Pulp, Squamish, B.C., and Domtar Inc., Windsor, Quebec.

Past employment

Prior to entering private practice, Neil McCubbin was employed by pulp mills and the associated service industry

1970 - 1973 Beak Consultants, Montreal, Quebec, Project Engineer

Responsible for a number of feasibility studies and detailed design for pulp and paper mill effluent treatment systems, and internal process modifications to control effluent quality.

Review of air pollution control technology in the Swedish pulp industry. This included visits to eleven mills and the preparation of the project (CPAR Secretariat, Ottawa, Ontario)

Review of European experience with Rotating Biological Contactor waste treatment systems. This included visits to six operating installations and various research establishments in Germany, France, Denmark, and England (Environment Canada, Ottawa, Ontario)

1968 - 1970 Multifibre Process Limited, Montreal, Quebec.

Project Engineer with turnkey chlorine dioxide system equipment manufacturer.

Responsible for design, construction and start-up of bleach chemical plants and air pollution control equipment (Georgia Pacific, Crossett, Arkansas and Western Kraft, Hawesville, Kentucky).

1966 - 1968 North Western Pulp and Power Ltd., Hinton, Alberta

Engineer in pulp mill. Projects included installation of primary clarifier and aerated stabilization basin.

1965 - 1966 Rayonier Canada Ltd., Woodfibre, B.C.

Project Engineer during start-up of kraft pulp mill expansion.

Publications

Solutions to Limitations in Recovery System Capacity when Closing the Process in Existing Mills. International Non-chlorine Bleaching Conference, Orlando, 1996.

Is Deinking Environmentally Desirable? Proc. International Environmental Conference, Portland, Oregon, 1994. (With Jens Folke) Paper won prize as "Best in General Category")

Dioxins and Organochlorines in the Ontario Kraft Industry. Proc. CPPA Annual Mtg., Montreal, 1989. (with J.B. Sprague and N. C. Bonsor)

Best Available Technology for the Ontario Pulp and Paper Industry. (With E. Barnes, E. Bergman, H Edde, J Folke, and H Edde). Report prepared for the Ontario Ministry of the Environment. 1992 (600 pp)

Kraft Mill Effluents In Ontario (with John B. Sprague and Norman C. Bonsor), April 1988. Report prepared for the Ontario Ministry of the Environment (260 pp)

Effluents from Non-kraft Pulp and Paper Mills in Ontario (with John B. Sprague and Norman C. Bonsor), 1991. Report prepared for the Ontario Ministry of the Environment (300 pp)

The Basic Technology of the Pulp and Paper Industry and its Environmental Protection Practices, Environment Canada, EPS 6-EP-83-1. (winner of distinguished award, Society for Technical Publications and Graphic Arts Competition, 1984) (179 pp)

State of the Art of the Pulp and Paper Industry and its Environmental Protection Practices, Environment Canada, EPS 3-EP-84-2. (128 pp)

Costs and Benefits of Various Pollution Prevention Technologies in the Kraft Pulp Industry. Proc. International Symposium of Pollution Prevention in the Manufacture of Pulp and Paper - Opportunities and Barriers. Washington DC. August 18-20, 1992.

Economic Impact of Proposed Regulations on Pulp and Paper Industry - BOD, TSS, Toxicity, Organochlorines (AOX) Dioxins and Furans, Prepared for Environment Canada, No C&P KE 144-9-6190. 1990

Technology Available to Compensate for Recovery Boiler Overloads, Proc. CPPA Environment Conference, Thunder Bay, Ontario, October, 1993.

Review of Technology for Overcoming Capacity Limitations in Kraft Pulp Industry Recovery Boilers. Prepared for Industry and Science and Technology Canada (July, 1990)

Review of EPA Regulations. Pulp and Paper Canada, December 1993.

Eco-Labeling in Europe. Pulp and Paper Canada, September 1993.

Summary of Proposed Air Emission Standards for US Mills, Pulp and Paper Canada, February, 1994.

Significance of AOX vs. Unchlorinated Organics, Proc. CPPA Environment Conference, Thunder Bay, Ontario. October 1993.

Variability of Effluents from Mills with Advanced Control, Proc TAPPI Environmental Conference, Richmond VA, 1992. (with Jens Folke, Alistair Stewart, and Kirsten Vice) TAPPI Vol. 77, No. 1, January 1994..

Simplified Bioassays and Chemical Analyses to be Used for Regulatory Purposes in the Pulp Industry. (with Jens Folke, Lars Landner and Karl-Johan Lehtinen) Proc TAPPI Environmental Conference, Boston, March 1993.

Is AOX Removal by Biological Treatment Consistent with Environmental Protection Objectives? Proc. TAPPI Environmental Conference, Richmond VA, 1992. (with Jens Folke and Lars Landner)

An Evaluation of European Experience with the Rotating Biological Contactor, Environment Canada, EPS 4-WP-73-4.

Review of Swedish Pulp and Paper Industry Air Pollution Control Technology, CPPA Environmental Conference, 1974, Member of Five-member Canadian Study Group (report author), CPAR Secretariat.

Energy Conservation vs. Fuel Alternatives: Conservation Could be the Better Investment, Pulp and Paper Canada, May 1981.

A Practical Method to Increase Efficiency of Existing Precipitators, (Winner of 1978 Douglas Jones Award).

In-plant Suspended Solids Control Systems are the Most Economical, Pulp and Paper Canada, April 1984.

Simplified Toxicity Testing for Mill Effluents, Pulp and Paper Canada, July 1984.

Dispersing Atmospheric Pollutants, Pulp and Paper Canada, November 1984.

Monthly series on using microcomputers in mill engineering and technical departments. (October 83 to Dec 2004).

Process Engineering: What Role for Micro-computers?, TAPPI Engineering Conference, Boston 1984.

Process Simulation: A Key Tool for the Design and Modernization of Mills in the Eighties, Pulp and Paper Canada, August 1982.

Generation of Steam for TMP Mill Exhausts, Pulp and Paper Canada, March 1981.

Alternatives to Fossil Fuel for the Lime Kiln, Proc. Ottawa, CPPA Energy Conference 1983.

Assessment of Chlorine Dioxide Generating Capacity in the Canadian Bleached Pulp Industry. Industry, Science and Technology Canada, Ottawa, Ontario, Contract No. 67RPI-9-0278, July 1990. (With Dennis Owen)

Awards

Best paper in "General Category" at TAPPI International Environmental Conference, Portland, Oregon, 1994.

Doug Jones Award 1978 (Best paper presented at a CPPA meeting on an environmental issue).

National Award Society of Technical Communications 1984.

Tasman Fellowship 1988.

Canada's Who's Who - 1991 to date.