

DAVID F. DICKINS, P.Eng.

EDUCATION

B.A.Sc. Mechanical Engineering

University of British Columbia, Vancouver, 1971

Specialized • Communications Strategy Course, St. John's, 1998

Courses • Environmental Hearings Course, Calgary, 1990

Professional • Association of Professional Engineers of British Columbia

Affiliations • Society of Naval Architects and Marine Engineers (SNAME)

EMPLOYMENT

1998-Present DF Dickins Associates Ltd., La Jolla, California

1980-1998 DF Dickins Associates Ltd., British Columbia

1978-1980 DF Dickins Engineering, Yellowknife, N.W.T.

1974-1978 Vice-President of Operations. Norcor Engineering and Research Ltd., Yellowknife, N.W.T.

1971-1974 Research Scientist. Department of the Environment, Ottawa, Ontario.

EXPERIENCE PROFILE

Specialist areas: Marine transportation risk, impact assessment, and oil spill response.

David Dickins has 25 years of project management experience, including operation of his own consulting firm which has provided engineering and environmental research services for government and industry clients in the United States and Canada since 1978.

Over the past ten years, many projects have focused on tanker casualty analysis, evaluation of oil spill response strategies, and sensitivity mapping. Examples of this work include tanker risk assessments for the Canadian Coast Guard and States/BC Oil Spill Task Force, participation in a highly successful international experiment to demonstrate controlled in-situ burning of crude oil in the open ocean, and the completion of several oil spill response atlases.

Mr. Dickins has evaluated shipping routes throughout Canada, Alaska and Russia. Specialties include developing databases of marine conditions affecting ship performance and safety, and evaluating the risk profile of different operations combining the predicted frequency of oil spills with their expected consequences.

Mr. Dickins has participated in numerous environmental hearings, and community workshops as an expert witness, chairman, and facilitator. Mr. Dickins practices as a registered engineer in the Province of British Columbia, and in 1998 served as member of the Canadian Coast Guard Pacific Regional Advisory Council on Oil Spill Response prior to taking up residence in the United States.

SELECTED PUBLICATIONS

Oil Spill Countermeasures for Ice Covered Waters. Invited chapter for spill control and recovery review commissioned by International Union of Pure and Applied Chemistry, London, 1997 (With Ian Buist, S. L. Ross Environmental Research).

Oil and Ice: Beaufort Sea Nearshore Oil Spill Response Options. Presented at the Symposium on Oil Spill Prevention and Readiness, Valdez, Alaska, October 1996 (With Nick Glover, Alaska Clean Seas).

Potential Effects of Vessel Design and Operational Improvements on Environmental Risk. Presented at a conference on Marine Oil Prevention sponsored by BC Environment and the Washington State Office of Marine Safety, April 4, 1995. (Sole author.)

Recent Shoreline Mapping Projects in British Columbia and Significance to Oil Spill Countermeasures Planning. In Proceedings of the Fifteenth Arctic and Marine Oil Spill Program Technical Seminar, Edmonton, June 1992. (Co-Author with J. Harper.)

Environmental Sensitivity Atlas for the Lancaster Sound Region. In Proceedings of the Thirteenth Arctic Marine Oil Spill Technical Seminar, Edmonton, June 1990. (Principal Author.)

Design and Operation of Oil Discharge Systems and Characteristics of Oil Used in the Baffin Island Oil Spill Project. *Arctic* Volume 40, Supplement 1, 1987. (Principal Author.)

Environmental Atlas for Beaufort Sea Oil Spill Response. In Proceedings of the Tenth Arctic Marine Oil Spill Technical Seminar, Edmonton, June 1987. (Principal Author.)

Fate and Behavior of Water-in-Oil Emulsions in Ice. In Proceedings of the Sixth Arctic Marine Oil Spill Program Technical Seminar, Edmonton, April 1983. (Co-Author.)

Dome Petroleum's Oil and Gas Under Sea Ice Study. In Proceedings of the Fourth Arctic Marine Oil Spill Program Technical Seminar, Edmonton, June 1981. (Co-Author.)

SELECTED CONSULTING PROJECTS: ENVIRONMENTAL RESEARCH

Northstar Oil Spill Response for *BP Exploration (Alaska) Inc., 1996 - 1999*

- The company prepared descriptions of oil spill fate and behavior, and response options for spill scenarios connected with both a production facility and pipeline operation. David Dickins also advised the joint industry/government North Slope Spill Response Project Team on response strategies.

Environmental Impact of Vessel Operations for *Voisey's Bay Nickel Company, 1997-98*

- Dickins Associates assisted the owners of a world-class nickel deposit on the Labrador Coast in dealing with the perceived and expected impacts of winter vessel operations.

ARCAT II Evaluation for *Alaska Clean Seas, June 1996*

- Dickins was tasked with reviewing the past performance, and expected utility of a catamaran spill response vessel against anticipated future requirements.

Oil Handling Facilities- West Coast Contingency Plans

for Canadian Forest Products, Fletcher Challenge, Interfor, 1994 to 1995

- Plans were prepared to meet new government regulations governing the offloading of oil barges at marine terminals. Work involved developing prevention and response strategies and site specific action plans.

Rescue and Escort Tugs for Tankers *for Robert Allan Ltd., RCG/Haglar Bailly, 1993-95*

- These studies examined the potential costs and benefits and expected performance of rescue salvage and escort tugs across Canada and off the West Coast.

Double Hull Tankers *for BC Environment Lands and Parks, 1995;*

- Dickins Associates was contracted to prepare a concise position paper for public distribution, summarizing the engineering, economics and regulatory issues affecting the timely introduction of double-hulled tankers on the West Coast.

Evaluation of Unsolicited Proposals

for the Marine Spill Response Corporation, Washington D.C., 1993 to 1995

- Dickins Associates was selected through competitive bid to act as the agent for MSRC in reviewing all unsolicited proposals and ideas submitted worldwide to the organization.

Conference on Oil Spill Response in Dynamic Broken Ice

for Cook Inlet Spill Prevention and Response, March 1994

- The company organized and facilitated a highly successful conference with the cooperation of the local US Coast Guard Marine Safety Office, to examine problems of spill response in strong tidal areas.

Modifications for a Spill Response Barge

for Naval Engineering Unit Pacific, DND (subcontract to Peter S. Hatfield Ltd.), 1993

- Dickins Associates participated in a study to determine the modifications required to convert a newly acquired barge into a self-contained harbor spill recovery vessel.

Newfoundland Oil Burn Experiment *for Environment Canada, 1989 to 1993*

- This project involved supporting the management team planning of the first large-scale in-situ oil burning experiment on the open ocean carried out in August, 1993.

Inventory of Oily Waste Disposal Sites and Strategic Disposal Plan

for BC Environment, 1992 to 1993

- Dickins conducted a comprehensive survey of West Coast facilities in B.C., Washington

Tanker Risk Analysis

for Transport Canada (subcontract to Canarctic Shipping Co. Ltd.), 1992

- Dickins personnel developed a methodology for evaluating casualty probabilities along transportation routes and applied the method to a tanker operation on the East Coast.

Comparative Oil Spill Risk of Marine Areas

for Canadian Coast Guard with AECL Research, 1992

- The relative sensitivity of different marine areas to 10,000 ton oil spills was evaluated, and the probability of marine accidents was calculated using historical vessel casualty and traffic data.

Comparative Risk Evaluation of Tankers and Pipelines

Trans Mountain Pipeline Company Limited (subcontract to Dames and Moore), 1990 and 1992

- Dickins Associates evaluated the differences in marine spill risk which would result if a new offshore oil terminal was built at Low Point on the Olympic Peninsula in Washington State.

Review of Oil Spill Cleanup Costs

for Exxon (subcontract to Coastal & Ocean Resources Inc.), 1992

- Dickins Associates reviewed the cleanup costs associated with nine recent spills worldwide.

In-Situ Burning Workshop *for Alaska Clean Seas, 1991*

- Dickins facilitated an international workshop held in Anchorage. Over 160 people discussed the technical, environmental, and social aspects of contained burning as a viable oil spill clean-up technique.

Oil Spill Response Atlas for the Southwest Coast of Vancouver Island

David F. Dickins, P.Eng.

Curriculum Vitae

for the B.C. Ministry of Environment, 1990

- This computer generated atlas maps shoreline sensitivities, identifies priority areas and makes specific recommendations for oil spill response strategies.

Remote Sensing and Trajectory Modeling for Oil Spill Response

for Environment Canada, Conservation and Protection, 1991

- Dickins Associates facilitated two workshops to survey user requirements and establish the outline of a national strategy for remote sensing and trajectory modeling.

Environmental Risks of Oil Tanker Traffic on the West Coast

for the States/British Columbia Task Force on Oil Spills, 1990

- Dickins was the principal consultant to the States/B.C. Task Force on spill risk analysis. This project developed five detailed spill scenarios in terms of the environmental consequences and cost.

Tanker/Barge Safety

for the States/British Columbia Task Force on Oil Spills, 1989-90

- This study evaluated proposed measures for reducing the risk of oil spills from tankers and barges along the West Coast and made recommendations on the effectiveness of different improvements.

Newfoundland Oil Spill Exercise

for S.L. Ross Environmental Research Limited, 1987

- The joint U.S./Canada project afforded a unique opportunity to observe the capabilities of different oil spill containment booms and skimmers with a real spill of 18,000 gallons in the open sea.

Oil Discharge Systems for the Baffin Island Oil Spill Project (BIOS)

for Environment Canada, 1980-81

- BIOS was a twelve million dollar international experiment to assess the short and long-term fate and effects of oil stranded onshore compared to the impact of the same oil when chemically dispersed.