APPENDIX B

Study Team

Appendix B

Study Team Qualifications and Experience

Project Management Team

Karen Roberts, MEDes, MCIP is an Environmental Planner with expertise in environmental management, land use planning, environmental and socio-economic assessment, and stakeholder involvement. Ms. Roberts has managed or participated in a number of environmental and socio-economic assessments in Newfoundland and Labrador, including: managing the Trans Labrador Highway (Red Bay to Cartwright) environmental assessment; environmental assessment of proposed remediation/disposal options for stockpiled PCB-contaminated soil at Saglek, Labrador; socio-economic assessments for the Voisey's Bay Mine/Mill and Smelter/Refinery Projects; environmental assessment for the Newfoundland Transshipment Terminal; and an assessment of an oil spill along the Placentia Bay shipping route for the transshipment terminal. Ms. Roberts also recently coordinated a biophysical scoping study for a proposed road development in northwestern Nunavut.

Ms. Roberts has experience in designing, implementing and evaluating public involvement programs, and has managed or participated in local, provincial and national level consultation programs. Ms. Roberts managed the public consultation program for Husky Energy's proposed White Rose oilfield development, which involved six key informant workshops, eight public information sessions and a series of stakeholder meetings. She also coordinated activities associated with Husky Energy's participation in the public hearings on the White Rose development, and assisted with the national public consultation for the five-year review of CEAA. Ms. Roberts also carried out consultation programs for the Trans Labrador Highway (Red Bay to Cartwright), Newfoundland Transshipment Terminal, pole line upgrading/re-routing activities for Newfoundland Power and NewTel Communications, Terra Nova Development's environmental effects monitoring program and North Atlantic Refining's proposed co-generation development.

Ellen Tracy, BSc, is a Project Officer at JW in St. John's, Newfoundland. Ms. Tracy provided senior review for the Trans Labrador Highway (Red Bay to Cartwright) EIS. In addition, she has conducted an environmental overview of Trans Canada Highway re-alignment, Petitcodiac to Moncton, New Brunswick, socio-economic analysis for an environmental impact assessment of Highway 104 between Salt Spring and Alma, Nova Scotia, fish habitat and population survey of a proposed upgrade and interchange for Route 1 (Prince of Wales), New Brunswick, fish habitat survey of a proposed twinning and re-alignment of Route 126 (Shediac to Cap Pelé), New Brunswick, a Specific Environmental Evaluation of the Northumberland Strait Crossing Project (Confederation Bridge), preparation of an Initial Environmental Evaluation of a temporary work surface for the New Brunswick nearshore piers of the Northumberland Strait Crossing Project (Confederation Bridge), and an Environmental

Overview of Miramichi Bridge No. 3, Newcastle, New Brunswick. Ms. Tracy's experience on the above projects included project management, senior internal review of reports, client and regulatory liaison and public consultation.

Perry Trimper, BScF has been conducting research and working with northern ecosystems for 20 years. His particular area of expertise has been wildlife and wildlife habitat as it relates to environmental assessment. Since joining JW in 1987, Mr. Trimper has been involved in a variety of projects relevant to the proposed scope of work including several for DWST (*e.g.* Trans Labrador Highway Phase II EA, Outer Ring Road IEE, Improvements to the Trans Canada Highway in the Vicinity of Terra Nova National Park, and the Prefeasibility Study of the Trans Labrador Highway). Biological experience includes baseline data collection for the Goose Bay EIS for DND from 1987 to 1989, and subsequent role as the study team leader and the navigator/observer for the 1991-2001 raptor and harlequin duck monitoring programs (including telemetry monitoring) that have been conducted throughout Labrador and Quebec as part of DND's commitment to avoid sensitive wildlife habitat. This work also initiated a two-year research program looking specifically at the effects of low-level jet aircraft on nesting osprey in Labrador. The results of which have been published in the *Journal of Applied Ecology* (Trimper et al. 1998) and *Canadian Field Naturalist* (Chubbs and Trimper 1998). He was also responsible for the terrestrial component of the Environmental Baseline Characterization Program conducted in support of the environmental assessment of the Voisey's Bay mine/mill. The terrestrial component included research on raptors, harlequin duck and other waterfowl, moose, caribou and other wildlife in the area. Mr. Trimper has conducted numerous baseline wildlife studies for smaller projects throughout Newfoundland and Labrador.

Colleen Leeder, MSc is the Environmental Sciences Division Manager in JW's St. John's office. She has over thirteen years experience in environmental assessment procedures and policies, including cumulative effects assessment. Colleen has extensive experience with both the provincial and Canadian environmental assessment processes. She provided strategic environmental assessment advice to DWST for the Trans-Labrador (Red Bay to Cartwright) Highway, Husky Oil for the proposed White Rose Oilfield Development, Newfoundland and Labrador Hydro and Hydro-Quebec for the proposed Churchill River Project, to Iron Ore Company of Canada for the proposed Tailings Management Plan and Luce Pit Development, to Petro-Canada for proposed exploratory drilling in the Flemish Pass, and to Public Works and Government Services Canada. Prior to joining JW in 1995, she worked for seven years with the Environmental Assessment Division of the Newfoundland Department of Environment. As Section Head, Colleen was responsible for the administration of the Newfoundland and Labrador *Environmental Assessment Act* and was directly involved in multi-jurisdictional environmental assessments of projects as an EA Committee Chairperson. Ms. Leeder has participated in conferences, training seminars, and workshops where she has made presentations to industry groups, government, engineers, and non-governmental organizations with respect to environmental assessment legislation and methods. Most recently, she co-authored and presented a paper on cumulative effects assessment, using the Trans-Labrador (Red Bay to Cartwright) Highway as a case study.

Paula Reid, M.E.S., is the Manager of IELP in Happy Valley-Goose Bay, Labrador. As Manager she is responsible for the daily management and operation of the company. Ms. Reid received her Bachelor of Science (Honours) degree with a major in Earth Sciences from Memorial University of Newfoundland in 1998. In the spring of 2000, she completed her Master of Environmental Science degree, also from Memorial University. During this time she worked on numerous research and field oriented projects which served to enhance both her environmental knowledge and her communication skills. In the Fall of 2000, Ms. Reid was involved in the Labour Force Baseline Study conducted for the Labrador Hydro Project. She has also been involved in coordinating many projects that IELP has worked on in the past. Prior to joining IELP, Ms. Reid worked with the Conservation Corps on the Climate Change Action program, which aimed at reducing household greenhouse gas emissions.

Professional and Technical Team

Kathy Knox, BSc (Honours) is an environmental scientist specializing in terrestrial ecology. Most recently, she coordinated the preparation of a document outlining drill cuttings disposal options for the White Rose oilfield and preparation of the registration for the Garden Hills oilfield, the first onshore oil development in Newfoundland and Labrador. She has been involved in numerous field investigations and prepared environmental assessments for a number of clients including DND, Voisey's Bay Nickel Company Limited, DWST, CHI Energy, Thundermin Resources, IOC, and the Labrador Hydro Project. Ms. Knox has participated in a number of surveys characterizing wetland types and their use by waterfowl and other migratory birds. She also coordinated the 1999 and 2001 Terrestrial Effects Monitoring Program for NARL which included analysis of lichen cover and distribution, as well as assessment of the effects of emissions on balsam fir and other vascular species. Ms. Knox also assisted in coordinating logistical support to other contractors involved in the Lower Churchill Hydro Project in Labrador. While working with the provincial Wildlife Division, Ms. Knox coordinated interagency projects and programs, including research on marten, caribou, bats, small mammals and raptors. Her work included assessments of habitat suitability for several species based on the structure and spatial configuration of available vegetation types. She also participated in numerous stakeholder working groups aimed at developing an integrated resource management planning process and coordinated wildlife input into the development of a wildlife-timber decision support system.

Michael Crowell, MSc Michael Crowell is a terrestrial ecologist employed by JW. He has over 17 years experience in environmental consulting. Mr. Crowell has worked on projects in a wide range of sectors including utilities, transportation, mining, manufacturing, tourism, housing, military and federal, provincial and municipal governments. Mr. Crowell is experienced in the fields of botany, plant ecology, ornithology, mammalogy, herpetology, and wetland ecology. He is skilled in conducting vascular plant inventories, rare plant surveys, vegetation monitoring studies, plant community descriptions, plant community mapping from air photography, breeding bird surveys, aerial raptor and waterfowl surveys, terrestrial and aquatic bird monitoring studies, general mammal surveys, small mammal trapping, aerial large mammal surveys, reptile and amphibian surveys, wetland

evaluations, wetland functional analyses, and wetland delineations. Mr. Crowell has worked in most of the terrestrial and wetland habitat types in Atlantic Canada including Labrador and is familiar with the flora and fauna of the region.

Tom Northcott, MSc, is Vice-Present of Northland Associates (1995) Limited and a biologist with 30 years experience in wildlife and environmental studies. A consultant since 1976, he has undertaken numerous environmental projects in Newfoundland and Labrador, Atlantic Canada and Scandinavia. His Labrador experience includes: the Lower Churchill Hydroelectric Development; Kitts-Michelin Uranium Prospect; Trans-Labrador Highway; waterfowl harvests in coastal Labrador; areas of marine mammal and seabird harvesting by residents of coastal Labrador; a member of the federal environmental panel examining the impact of low level military flying on Labrador and northern Quebec; the Ptarmigan Trail (a snowmobile trail between Mud Lake and Paradise River); Voisey's Bay Mine/Mill Project; and the relocation of Davis Inlet to Sango Bay. Prior to forming Northland in 1976, Mr. Northcott was a senior biologist with the provincial Wildlife Division (1972-1976). In this capacity he carried out wildlife research and management programs throughout the island and Labrador. Before his employment with the Wildlife Division, Mr. Northcott taught biology at Lakehead University in Thunder Bay, Ontario, for six years.

Max Penashue, Principal, Land Management and Survey Systems participated in aerial surveys for waterfowl and raptors, and assisted in the wetland aerial reconnaisance and ground-truthing of representative wetland sites. **Kanani Penashue** provided translation services for the raptor and waterfowl studies, translating an information circular describing the study methodologies into Innu-eimun for distribution prior to field surveys. Ms. Penshue also translated the executive summaries of the final reports for the two studies and public consultation material used in the public consultation sessions held in Labrador.

Bruce Bennett, BSc (Honours) is a senior scientist with JW's St. John's office, who has a solid background in environmental assessments, including site inspections, feasibility studies, land and resource use reviews, baseline surveys, regulatory (and permitting) reviews and environmental protection planning. He was involved in provincial and federal environmental assessments of Voisey's Bay mine/mill, Star Lake Hydroelectric Project, Nugget Pond Mine Project, Trans Labrador Highway (Phase II). Mr. Bennett has completed the one-day CEAA Training Course that is provided by the federal office. He has also attended a short course on EEM design (27th annual ATW). Over the years, Mr. Bennett has been on project teams that have completed registrations for ten hydroelectric projects and thirteen mining projects. He has also worked on four EIS's and two hydroelectric project EPRs and five mining project EIS studies. Since 1995, Mr. Bennett has also been involved with seven fish habitat compensation programs. Mr. Bennett has provided senior level reviews of aquatic components of the Slave Geological Province Proposed Transportation Corridor Study, Kennady Lake (Monopros) prospect study and the Meadowbank Aquatic Baseline Program (Nunavut Environmental Limited).

In the execution of various baseline and EEM field programs, Mr. Bennett has participated in a great number of fish and fish habitat surveys, water quality surveys, and wildlife surveys including those for caribou, moose, black bear, raptor, waterfowl. These have been mainly within Newfoundland and Labrador, although he has provided senior advice for surveys in the north.

Barry Wicks, BSc, is a Freshwater Fisheries Biologists with JW's St. John's office. Barry has over 10 years experience with all aspects of freshwater fish biology including execution of field work, program design, data analysis and report writing. Prior to joining JW he was Planner/Manager for the Indian Bay Ecosystem Corporation, a non- government organization involved in implementing a community based fishery resource management program. Since joining JW Barry has acted as crew leader for field programs associated with the Star Lake Hydro Development EEM project and IOCC's Tailings Management project. Mr. Wicks has conducted a number of habitat assessments, fish population assessments and water, sediment and benthic sampling programs.

Yves Labrèche, **BSc, MSc (Anthropology),** a senior scientist with Jacques Whitford Environment Limited (JW), is currently providing archaeological and ethnographic and services in Newfoundland, Labrador and Québec. Mr. Labrèche specializes in research and assessment of Labrador and Northern Quebec Aboriginal subsistence and settlement (land and resource use) from precontact times to the present. Mr. Labrèche is a qualified researcher in this domain, with appropriate background in cultural anthropology and archaeology consolidated by experience in conducting field research programs with the Innu (since 1996) and other Aboriginal groups (Cree and Inuit). He has been involved in applied research and assessment programs in the Arctic and subarctic regions since 1973. Mr. Labrèche is currently preparing a PhD thesis in anthropology which provides an interpretive summary of subsistence activities (hunting and fishing) conducted in a large region by two Aboriginal communities. This study integrates land and resource use data, traditional ecological knowledge and cultural materials collected during several field programs led by Mr. Labrèche in collaboration with those communities between 1985 and 1995.

Mr. Labrèche has been involved in northern research and impact assessment for over 25 years and has worked closely with Aboriginal communities in Québec (e.g., Kangiqsujuaq and Salluit) and Labrador (e.g., Nain, Davis Inlet and Sheshatshiu), notably in the context of hydroelectric projects, mineral development and civil construction projects. He has also conducted background research, ethnographic interviews and mapping exercises integrating land use data from Québec and Labrador (e.g., Churchill River Power Project; Trans Labrador Highway from Red Bay to Cartwright and from Bob's Brook to Churchill Falls). His research interests include the integration of land use data, ethnographic sources and archaeological data and he has developed and applied integrative methods to several field programs.

Between 1998 and 2001, Mr. Labrèche coordinated the extensive historic resources assessment of the Churchill River Power Project, Labrador. In this capacity, he designed and coordinated Settler interviews (1998) and conducted interviews and site visits along the Churchill River valley with senior Innu informants in the context of land

use surveys (1999). Mr. Labrèche also coordinated the historic resources assessment of the proposed mine/mill project at Voisey's Bay, Labrador in 1996, 1997 and 2002. In 1997, this involved conducting interviews in Davis Inlet on potential Innu burial sites and providing detailed mapping and analysis of the results; this program was completed by a site visit at Voisey's Bay in 2002 with a senior informant and several Innu Nation representatives. In addition, Mr. Labrèche provided information sessions and site orientation to Innu Nation monitors and representatives at Voisey's Bay in 2002.

Since 1985, Mr. Labrèche has trained and hired numerous Aboriginal participants for a wide range of field research or assessment programs in northern Québec and Labrador (e.g., two-week training program in Nain followed by a twelve-week fieldwork program at Voisey's Bay). Prior to joining JWEL in 1996, he participated in a seven-week ethnography (cultural anthropology) fieldwork program for the INRS-Culture et Société (Université du Québec à Montréal, 1994). He has also taught cultural anthropology and archaeology at Université du Québec à Montréal and in different colleges between 1985-1993.

Mr. Lorne Boone, M.Eng., P.Eng., P.Geo. is president of Newfoundland Geosciences Limited and Manager of the Geotechnical Engineering Division. He has been with NGL for 15 years. Mr. Boone has been responsible for planning and carrying out geotechnical, hydrogeological, environmental, and quality control and materials testing assignments for all types of marine and land-based projects in the province. Mr. Boone is familiar with a wide variety of site investigation practices and protocols for environmentally sensitive projects, and has successfully negotiated remediation objectives with provincial regulators based on risk assessment criteria and design initiatives. Mr. Boone has conducted previous geological investigations for the Trans Labrador Highway Project and for the Voisey's Bay mining project in Labrador.

Mr. David J.Butler, B.Sc., P.Geo., is a Scientist Level III with NGL Since his employ last October, he has developed a strong background in the mineral exploration sector, has gained an abundance of knowledge through private industry, and has dealt with numerous government departments during his 15 years of professional work experience. With NGL he has gained a range of experience in the geotechnical engineering field. He is an expert with MapInfo and ArcView GIS software, and has extensive knowledge of information technology. Mr. Butler conducts petrographic analysis of construction aggregates and is responsible for the analytical testing related to NGL's testing equipment for sulpher determination in rock for acid generating rock analysis.

Caroline Hong, BSc is an environmental scientist with JW's Happy Valley-Goose Bay office. Ms. Hong has participated in environmental baseline studies for Voisey's Bay Nickel Company, NDT Ventures and the Churchill River Power Project. During the 1995 and 1996 field seasons, Ms. Hong coordinated logistics for the JW's environmental baseline characterization studies at Voisey's Bay. In this capacity, she was responsible for shipping/receiving dangerous goods, general freight and samples for analysis, and coordinating personnel moves to and from Happy Valley-Goose Bay and the base camp located on the MV Sir John Franklin, Anaktalak Bay. Ms. Hong was also project manager and co-ordinator for logistics during the 1998 and 1999 field seasons for environmental baseline studies for the Churchill River Power Project.

Ms. Hong coordinated an intensive public consultation program on solid waste management practices throughout Newfoundland. The communications and logistics aspect of this project were key to the success of this extensive consultative effort in the province for the Department of Environment. Ms. Hong has also been involved in logistics, field sampling and report preparation on other projects such as 1995-1998 raptor/harlequin duck monitoring programs and investigation of jet aircraft effects on nesting osprey for the Department of National Defence; environmental baseline characterization and preparation of an EPP for NDT Ventures Limited; noise environment monitoring for Urban Aerodynamics Limited and Universal Helicopters Limited; several environmental site assessments - Phase I and Phase II investigations; field sampling surveys for water, soil, vegetation, and PCB contaminants; and aerial survey studies.

Steve Bonnell, MA is an Environmental Assessment Specialist with JW St. John's, NF office. He holds a Masters Degree in Geography from Memorial University of Newfoundland, focussing on cumulative environmental effects assessment and management. Mr. Bonnell has extensive experience in working with both the provincial and federal environmental assessment processes, and has been involved in assessments conducted in relation to a wide range of projects. He was a key member of the study team for the Trans Labrador Highway (Red Bay to Cartwright) environmental assessment, authoring its socioeconomic effects assessment and various other sections of the EIS and Addendum. Other recent assessments include those conducted in relation to the Duck Pond Copper-Zinc Mine in west-central Newfoundland, the White Rose Oilfield Development, and the Voisey's Bay Mine/Mill Project. He has also published and presented papers on environmental assessment processes, principles and methodologies. Mr. Bonnell also worked on the Churchill River Power Project, where he was responsible for coordinating Innu involvement in the design, conduct and review of the environmental studies conducted in relation to that project, and in planning for its future environmental assessment. He has also held related term positions with Public Works and Government Services Canada, the Western Newfoundland Model Forest Inc., and the Canadian Forest Service.

Keith Storey (Principal, Community Resource Services Limited (CRS)) is also a Professor of Geography at Memorial University of Newfoundland. His undergraduate degree is from Leicester in the United Kingdom (BA Hons. 1966) and his graduate degrees are from Simon Fraser (MA 1969) and Western Ontario (PhD 1977) in Canada. Much of his consulting work has been involved with socio-economic impact assessment and management of primary resource developments in rural and remote areas. He was involved in preparing the socio-economic impact statements for the Hibernia, Terra Nova and Newfoundland Transshipment Terminal projects. He has published widely in industry and academic journals on the environmental assessment process. In his teaching role at Memorial University he offers courses at the undergraduate and graduate level on environmental impact assessment processes, methods and practice, and offers a similar course at the graduate level as a visiting professor at the Western Australia School of Mines and the Universidad de Chile.

Mark Shrimpton, MA (Geography), (Principal, CRS) has twenty years experience of socio-economic impact scoping, planning, assessment, management, monitoring and auditing, including economic benefits planning, working for clients in government (e.g. the UN International Labour Office, U.S. Minerals Management Service and Government of Newfoundland and Labrador), the oil industry (e.g. Exxon-Mobil, Petro-Canada, Chevron Canada Resources and Conoco Canada), the mining and minerals processing industry (e.g. Voisey's Bay Nickel and CRA-RTZ), utilities (e.g. Newfoundland and Labrador Hydro and the Icelandic National Power Corporation) and local businesses and community groups. This has included a senior role in assessing the socio-economic effects of the Hibernia, Terra Nova, White Rose, Trans Labrador Highway (Red Bay to Cartwright), Davis Inlet Relocation, Voisey's Bay Mine/Mill and Voisey's Bay Smelter/Refinery projects in Newfoundland and Labrador.

Mark has made presentations on socio-economic impacts issues at conferences and universities in the United States, Canada, England, Scotland, Norway, Lithuania, Malaysia and Australia. He has also published a large number of essays, papers and reports related to socio-economic effects and benefits planning. A former Director of Research for the City of St. John's, he is an Adjunct Professor of Geography at Memorial University, providing specialist advice and teaching on socio-economic issues.

Kent Gustavson, MSc. PhD., is an environmental and resource economist and Co-ordinator of the Socio-Economic and Public Consultation Discipline Group of Jacques Whitford Environment Limited in Dartmouth, Nova Scotia. He has over ten years experience in the field, with particular expertise in socio-economic assessments of large projects and natural resource use. Integrating the approaches of environmental and natural resource economics, ecology, and environmental management, Dr. Gustavson has employed rapid socio-economic analysis, environmental valuation, economic production analysis, and ecological economic systems modelling in his work. He has published numerous journal articles, book chapters and reports, and has presented papers at many workshops and conferences. As an expert in socio-economic assessment, recent relevant projects on which Dr. Kent Gustavson has been principally involved include: the Blue Atlantic Transmission System socio-economic impact assessment; the Mica-Revelstoke-Keenleyside hydro development water use plan recreation study; socio-

economic assessment of the proposed Beaufort Sea Marine Protected Area; and the socio-economic context for management of the Montego Bay Marine Park, Jamaica.

Zoë Kroeker, MES.,is an environmental analyst with the Socio-Economic and Public Consultation Discipline Group at Jacques Whitford Environment Limited in Dartmouth, Nova Scotia. Ms. Kroeker has been involved in a number of environmental studies in Canada including environmental assessments, public and stakeholder consultation and policy studies. Examples of past projects include the Blue Atlantic Transmission System project environmental assessment, the socio-economic impact assessment of the Marshall Decision on Mi'kmaq communities, and the development of environmental management systems for Atlantic printing businesses. She has also been actively involved in research on climate change and greenhouse gas strategies, through the Canadian Climate Change Impacts and Adaptation networks and Dalhousie University's industrial ecology group. Through these, Ms. Kroeker has developed a broad range of expertise regarding municipal and provincial environmental issues and management strategies.

Welesito Rombaua, MA., has ten years experience in environmental impact assessment and project feasibility studies. Mr. Rombaua is currently the Task Leader for the socio-economic impact assessment of the proposed 15-km Highway 104 upgrading in Antigonish, Nova Scotia, and is supporting the socio-economic impact analysis component of the environmental assessment for the Blue Atlantic Transmission System project in Nova Scotia. He has participated in over ten environmental impact assessment projects as a socio-economic analyst and over 30 feasibility studies as an economist/financial analyst. Mr. Rombaua has extensive experience in the assessment of socio-economic components of environmental assessment projects, such as: commercial, industrial, and residential land use effects; property value loss and compensation; labour and employment opportunities; impact on recreation and tourism; and effects on vulnerable, marginalized or disadvantaged groups.