



PIERRE HUDON, Biologist

One of the founders of HDS Environment, Mr. Hudon has over twenty years of experience in environmental projects in Canada and abroad. He has been mainly involved in the fields of environmental auditing, environmental site assessment and remediation, environmental emergency planning and response, wastewater treatment, environmental management systems, hazardous wastes management and environmental training.

EDUCATION

- Laval University
Bachelor in Engineering Geology (1979)
- Laval University
Bachelor in Biology (1976)

ADDITIONAL COURSES

- AQHSST
Symposium on Odour Problems (1997)
- COSE (1979)
Technical Report Writing (1979)
- École des H.E.C.
Outsourcing of Environmental Activities (2001)
- École Polytechnique
Implementation of ISO 9000 for Consultants (1994)
Health and Safety on Construction Sites (1993)
- Environmental Law (1988)
- Environmental Toxicology (1987)
- Laval University
Stream Hydrology and Hydraulics (1982)
- MNRQ
Certified Auditor of Petroleum Equipment (1999)
- Onyx International
Work in Close Spaces (2001)
- Robert Daigneault, Lawyers
Bill 72- Site protection and rehabilitation (2002)
Bill N0156-Landfilling of contaminated soils (2001)
- Site Bio-Rehabilitation, Design and Operation (1993)
- Symposium on PCB Management (1985)
- University of Montreal
Total Quality in Consulting (1989)

POSITIONS HELD

2017 - 2026	Hudon Desbiens St-Germain Environnement inc., Montreal (Qc) <i>Senior consultant</i>
2001 - 2017	Hudon Desbiens St-Germain Environnement inc., Montreal (Qc) <i>Vice-President</i>
1990 - 2001	Bio Géo Environnement (Onyx Industries/Vivendi), Montreal (Qc) <i>Vice-President</i>
1989 - 1990	Environcorp inc. (Merger of Lavalin and Sanivan), Montreal (Qc) <i>Director, Environment</i>
1985 - 1989	Sanexen inc., Montreal (Qc) <i>Director, Site Assessment and Remediation, Wastewater Treatment</i>
1981 - 1984	Sanivan inc., Montreal and Sept-Îles (Qc) <i>Director of Operations, Montreal Branch (1984)</i> <i>Sales and Operations Coordinator, Montreal Branch (1983)</i> <i>Director, Sept-Iles Branch (1981)</i>
1979 - 1981	Iron Ore Company of Canada, Sept-îles (Qc) <i>Environmental Specialist, Special Projects</i>

FIELDS OF ACTIVITY

- Environmental Auditing
- Environmental Management Systems (EMS)
- Environmental Site Assessment and Remediation
- Hazardous Wastes
- Emergency Planning and Response
- Wastewater Treatment
- Environmental Training
- Environmental Impact Assessments

MAIN PROJECTS

ENVIRONMENTAL AUDITING

Department of National Defence

- Historical Research on depleted Uranium (U_{238}) wastes used for technical testing at the Valcartier Research Centre (2002).
- Historical Research on the identification of potential impact sites on the Valcartier and the Nicolet properties (1999-2000).

Financial Institutions

- Auditing of over 1,000 sites for large financial institutions in miscellaneous industrial settings (1990-2005):
 - gasoline stations;
 - steel plating;
 - food and agriculture;
 - heavy industry (non ferrous metals);
 - various plants.
- Environmental auditing of Waste USA sanitary landfill in Vermont (1991).
- Environmental auditing of several Lavalin subsidiaries (1991).

Fix Auto

- Environmental Audit of 2 body shops located in Quebec City (2000).

Gestion J. Laprade

Environmental audits of numerous repossessed properties throughout the Province of Québec (2001 to 2005).

Héroux Devtek

Environmental audits of several plants in the Montreal region (2002).

Messier-Dowty

- Environmental compliance audit of the Mirabel plant (1997 et 2002).
- Certificate of Authorization for a process change at the Mirabel Plant (2004).

Newalta (former NovaPb)

- Environmental audit of the secondary lead fusion facility and diversified environmental investigations on an annual basis (1990 à 2005).

Onyx Industries

- Environmental audit of the Mercier and Lambton hazardous waste treatment facilities operated by Safety Kleen (2000).
- Environmental audit of twenty-five waste treatment or storage sites operated by Onyx (1995 and 2001).
- Environmental Audits of various properties as part of due diligence during transactions (1990-2001).

Wulftec

- Environmental, Health and Safety audit of the plant operations in Ayer's Cliff, Quebec (2002).

ENVIRONMENTAL MANAGEMENT SYSTEMS (EMS)

Canadian International Development Agency (Colombia)

- Assessment of the environmental framework of Colombia in relation to the implementation of an integrated waste management centre (1997).

Centre Patronal de l'Environnement du Québec

- Committee member for the preparation of an EMS implementation guide (1998).

Park Avenue Automotive Dealership

- Evaluation of waste management procedures and operation of certain petroleum distribution equipment (2003).

Wire Rope Industries

- For a 300-employee steel cable manufacturer located on the Montreal island : review of the environmental policy, definition of the organisational structure, identification of main environmental issues, elaboration of the environmental programme, operational procedures, emergency plan and training (2001).

Net-Service Corp. (Algeria)

- Environmental training of the directors of an Algerian company to complete a technology transfer in the contaminated sites remediation sector (2001).

Nova PB

- Assistance in the implementation of the ISO 14001 sets of standards: review of applicable legislation, identification of significant impacts, design of environmental programme and writing of operational procedures (1999-2000).
- Evaluation of the environmental performance of the plant (2000 to 2005).

Onyx Industries

- Audit of the EMS in place at 25 Onyx locations in the Province of Quebec (1995 and 2000).

Public Works and Government Services Canada

- Supervision of the implementation of an EMS at the 715, Peel street office building in Montreal, including review of the Environmental Policy, definition of the organisational structure, identification of main environmental issues, elaboration of the environmental programme, development of operational procedures and of an emergency response plan (2001).
- Assistance in the preparation of an EMS manual based on ISO 14001 principles and on Sustainable Development objectives at the Valcartier Research Centre of the Department of National Defence (2000).

Valmet

- Audit and coaching of an EMS implementation in a Pulp and Paper Mill (1998).

SITE CHARACTERIZATION

American Iron and Metals

- Characterization of the former AIM installations in Montreal (1986).

Ciment Lafarge

- Characterization and clean-up of a property located near Hull (1984).

Department of National Defence

- In charge of a soil gas survey at the Valcartier Research Centre (2001).
- Study on the selection of the optimal scenario for the clean-up of trichloroethylene (TCE) in groundwater at the Valcartier Research Centre. Member of an expert Panel on the subject (2001).

Coopérative Fédérée de Québec

- Hydrogeological investigation at a site in Napierville, Quebec including groundwater quality monitoring (2003-04).

Denis Rochette Interspect

- Characterisation and of a residential property in Montréal following a heating oil spill (2003).
- Soil characterisation for a residence in the Plateau Mont-Royal district following a leak from an underground heating oil tank (2003 et 2004).

Entreprise MRB

- Characterisation and rehabilitation of a site occupied by a Shell service station (2002).

Fonds d'Investissement Focus

- Soil and groundwater characterisation at the site of a plant in St-Apollinaire, Quebec by means of about thirty boreholes including the installation of a twelve monitoring wells (2004).

Groupe Park Avenue

- Characterization and clean-up of various property sectors with underground storage tanks used for storage of petroleum products and solvents (1997-1998).

Hamel Pontiac Buick GMC

- Characterisation of a site in Montreal as part of an exchange between the City of Montreal and the car dealership (2004).

Hydro-Quebec

- Characterization of numerous sub-stations properties in the Laurentides and Montreal region (1985-2001).
- Characterization on Larocque Street in Valleyfield (1999).
- Hydrogeological investigation after the PCB fire at the IREQ research centre in Varennes (1984).
- Hydrogeological investigation following an hydrocarbon spill at the Manic 2 dam site in Baie-Comeau (1983-1984).

Ispat-Sidbec

- Soil characterisation beneath a sub-station impacted by dielectric oil contaminated by PCBs (2002).

Leland Industries

- Characterisation of a site destroyed by fire in the Joliette region (2002).

Les Industries Associées de l'Acier

- Implementation of a groundwater monitoring network and follow up monitoring of groundwater quality (2002 à 2005).

Messier-Dowty

- Hydrogeological investigation of an aircraft component plant located near Mirabel, Quebec (1999-2005).
- Monitoring of surface water (2000 à 2005).

Multipak

- Characterisation of an industrial site as part of a project to expand the plant (2002).

Newalta (former Nova PB)

- Installation of a network of observation wells including periodic water quality monitoring (1994-2005).

Onyx Industries

- Groundwater quality monitoring at the sites of six waste transfer stations (2003 et 2004).

Paul Demers et fils

- Environment audit (phase I et II) of a property producing ambulances. (2003).

Sani Gestion

- Characterisation of a site in Blainville as part of a financial transaction (2003).

Public Works and Government Services Canada

- Characterization of eight Agriculture Canada's experimental farms (2001).
- Work procedures and supervision of asbestos removal in a confined space of a building in Montreal (2001).

Société de transport de Montréal (Montreal public transport authority)

- Numerous site characterizations of mechanical maintenance shops affected with hydrocarbon spillages (1985).

Unibroue

- Characterization of soils in a portion of the plant where former activities included an active foundry up to the 1970's (2003).

Various confidential clients

- Groundwater modelling of fate and transport of organic pollutants (gasoline, diesel, PCBs, TCE, alcohol etc.) in dissolved or free phase (1980-2001).

Wulftec

- Characterisation of a site including the interior of the plant and the installation of monitoring wells (2002-04).

SITE REMEDIATION

Bijouteries Lavigueur

- Remediation of a site impacted by heating oil including the installation of a subsurface vapour extraction system (2004).

Bombardier

- Investigation into the occurrence of hydrocarbons in a series of monitoring wells following a tank leak and installation of passive hydrocarbon collectors (2004).

British Petroleum

- Aerobic bio-reactor for the treatment of oily sludges (1986).

Department of National Defence

- Project Manager for the clean-up of a practice shooting gallery contaminated by lead at the Valcartier Canadian Army camp (1995).

Fonds d'Investissement Focus

- Remediation of a wood treatment facility in St-Apollinaire, Quebec. Removal of 1,600 metric tons of PCP-impacted down to a 6-m depth underneath the plant, including underpinning and structural support works (2005).

Huiles Norco

- Biodegradation of 30,000 metric tons of hydrocarbon-contaminated soils in Ville St-Pierre (1990-2004).

Hydro-Quebec

- Remediation of a PCB-contaminated farm in Saint-Jérôme (1984).

ICI Canada

- Project Manager for the recovery of 1,130,000 litres of chlorinated solvents (DNAPLs) trapped under an aquifer in Shawinigan (1988).

Messier-Dowty

- Installation and regular monitoring of an automated system for the recovery of hydrocarbons in groundwater (2000-2005).

Pratt & Whitney Canada

- Bio-treatment of 1,000 m³ of hydrocarbon-contaminated soils (1988).

Quebec Ministry of Environment

- Clean-up after a PCB-contaminated oil spill in the Hull area (1984).

Société immobilière du Québec

- Lead cleanup in a practice shooting gallery (2000).

Various confidential clients

- Decontamination programs and clean-up supervision in numerous industrial, office and residential buildings impacted by heavy metals (Pb, Hg, Cr), petroleum hydrocarbons and PCBs (1980-2001).

Wulftec

- Installation of an in situ soil and groundwater treatment system (bioventilation et biosparging) for soil impacted by aliphatic aromatic hydrocarbons (2002-04).

HAZARDOUS WASTES MANAGEMENT

Guítabec

- Laboratory investigation of hazardous wastes as part of responsible care program (2003).

Numerous clients

- Development of disposal scenarios and clean-up supervision of a wide range of industrial wastes and miscellaneous contaminated material (1980-2001).

ONYX Industries

- In charge of preparing a training course on hazardous wastes for the employees and a transportation statement form (2001).

Pandrol Canada

- Hazardous Wastes Management Plan and implementation of a WHMIS information system (2001).

Royal Bank of Canada / Bodycote

- Assessment of volumes, management options and costs associated to the disposal of inorganic sludges stored on the Thermonic site (1999).

Zemex Industrial Minerals

- Investigation into the classification of waste materials to determine possible uses for this material in the construction industry (2003).

ENVIRONMENTAL EMERGENCIES

Denis Rochette Interspect

Emergency response following an accidental spill in a residence in Vaudreuil, Quebec including the installation of a soil vapour extraction system to remove gasoline vapours in the French drains around the building (2004) .

Hydro-Quebec

- Environmental follow-up on the biodegradation rate of an herbicide spill (2,4-D) in a wooded area (1985).

Onyx Industries

- Participation for the setting-up of the emergency response team for pathogens such as anthrax (2001).
- Supervision of environmental cleanup work at sites impacted by hazardous waste releases (2003-04).

Northern Canadian Power Company (North-West Territories)

- Preparation of plans and specifications and remediation of a site in Baker Lake contaminated after a spill of hydrocarbon in permafrost conditions (1985).

Quebec Ministry of Environment

- Emergency response after the major fire at the PCB storage warehouse located in Saint-Basile-le-Grand (1988) and tire depot fire in St-Amable (1990).

Various Insurance Companies

- Project Manager for over a hundred emergency responses for accidental spills of petroleum products and chemicals (1980 to 2001).

WASTEWATER TREATMENT

Ciment Lafarge

- Treatment of 110,000 litres of PCB-contaminated water (1984).

Crawford Insurance Company (Ontario)

- In-situ water treatment of 1,000,000 litres of formaldehyde-contaminated water in a forested area of Northern Ontario (1993-1994).

General Motors

- Monitoring of hydrocarbon-impacted water treatment operations during a planned production shutdown (1998).

Hydro-Quebec

- Development and installation of a mobile wastewater treatment unit from transformer pits in Montreal (1986).
- Project Manager for the treatment of PCB-contaminated water resulting from the clean-up of the PCB fire at the IREQ Varennes Research Centre (1984).

Moore Wallace

- Characterization of waste process water including recommendations regarding discharges to the municipal sewer system (2002-04).

Quebec Ministry of Environment

- In charge of the treatment of several millions of litres of wastewater following the fires at the Saint-Amable tire storage site (1990) and the Saint-Basile-le-Grand PCB warehouse (1988).

Uniboard Canada

- In charge of the treatment of formaldehyde-impacted groundwater following an accidental spill (1996).

Wulftec

- Investigation into the treatment of the plant's wastewater and recommendations on how to optimize its operation (2002).

ENVIRONMENTAL TRAINING

Financial Institutions

- Training of Account Managers from the Bank of Montreal, National Bank and the Business Development Bank of Canada in environmental auditing and environmental liabilities (1991-95).

Onyx Industries

- Preparation for a training course for employees handling hazardous wastes for one of the largest environmental clean-up company in Canada (2001).

ENVIRONMENTAL IMPACT ASSESMENTS

Quebec Ministry of Environment

- E.I.A. for a dam construction at a lake discharge in St-Jean-de-Matha (1985).

Quebec Ministry of Natural Resources

- E.I.A. on acid leachate from a mine tailings basin in La Tuque (1994).

Les Industries Associées de l'Acier

- Investigation into the impact of noise levels on the site as well as off site (2003 et 2004).

Newalta (former Nova Pb)

- Preparation of a study on the potential impacts of Fluorine on certain environmental components of a treatment process for transforming aluminium foundry wastes into fritted glass (2003-2004).

OTHER PROJECTS, PUBLICATIONS AND CONFERENCES

- Manager of Onyx Industries environmental affairs (1995-2001).
- Commercial delegate of the Montreal South Shore in Lyon, France (1994).
- Manager of a research and development committee for a major environmental contractor (1992-94).
- Environmental advisor on contaminated sites for the Ordre des ingénieurs du Québec (1988).
- Sauriol, Hudon, *Récupération d'hydrocarbures lourds*, presented at the Colloque technique sur le déversement de produits chimiques, Environment Canada (1988).
- Lecturer at the Association québécoise des techniques de l'eau (1987).
- Paquin, Hudon, Dussault, *Une expérience de traitement d'eau contaminée par des BPC*, published in the Revue des sciences et techniques de l'eau (1984).