

Management of Spent Fuel, Radioactive Waste and Decommissioning in SMRs or Advanced Reactor Technologies

7-10 November 2022

Ottawa, Canada

SPEAKER BIOGRAPHIES



Speaker biographies¹

Keynote

Name: James McKinney

Organisation /Company: Nuclear Decommissioning Authority

Position: Chief Strategist, Integrated Waste Management

Session: Conference Chair and Session 2.1 Presenter



Short Biography: James McKinney has over 25 years of experience in the nuclear industry and is the UK Nuclear Decommissioning Authority's (NDA), Chief Strategist for Integrated Waste Management. The NDA is the body responsible for the clean-up and decommissioning of the United Kingdom's nuclear legacy sites. Mr McKinney's key areas of interest are: holistic approaches to waste management, radioactive waste storage and disposal, treatment and packaging, graphite management and decommissioning wastes. On radioactive waste management issues, he represents the United Kingdom at the international level including at IAEA and NEA conferences and meetings.

After completing his PhD in 1996, Mr McKinney joined BNFL's Company Research Laboratory, which was based at the Springfields Site and was involved in waste treatment projects largely for Sellafield and Springfields. He then undertook a number of technical management roles at Springfields, Risley and Sellafield that covered all aspects of the waste management life cycle. Mr McKinney joined the NDA in September 2005 as the ILW Strategy Manager and is a Fellow of the Royal Society of Chemistry.

¹ Speaker biographies are listed in order of appearance in the programme.

Name: Thomas Louttit

Organisation /Company: Natural Resources Canada

Position: Elder in Residence

Session: Opening with Elder Thomas Louttit



Short Biography: Thomas Louttit is a member of the Moose Cree First Nation, whose traditional territory is located on the southwest side of James Bay, in northern Ontario. Elder Thomas lives his life in service to others. He is an Elder, firekeeper, teacher, pipe-carrier, role model, lodge keeper, volunteer, and mentor. He demonstrates exemplary integrity, wisdom, humility and leadership. Elder Thomas, with his characteristic modesty, describes himself simply as “a helper to the people.” In 2016, he received an honorary doctorate from Carleton University in recognition of his wise leadership and service to his community as an Elder. NRCan’s Elder in Residence Program was pleased to welcome Elder Thomas in April 2022.

Name: John Hannaford

Organisation /Company: Natural Resources Canada

Position: Deputy Minister

Session: Welcome address and introductory remarks



Short Biography:

Mr Hannaford was appointed Deputy Minister of Natural Resources Canada by the Prime Minister in January 2022. Prior to that, he served as Deputy Minister of International Trade at Global Affairs Canada.

Mr Hannaford has also held positions as Foreign and Defence Policy Adviser to the Prime Minister, Assistant Secretary to the Cabinet of Foreign and Defence Policy in the Privy Council Office, and Canada’s Ambassador to Norway.

As a member of Canada’s foreign service, Mr Hannaford has also had numerous assignments in Ottawa and at the Canadian embassy in Washington, D.C., during the early years of his career.

Mr Hannaford graduated from Queen’s University in Kingston, Ontario, with a Bachelor’s degree, with honours, in history. After earning a Master’s in international relations at the London School of Economics, he completed a Bachelor of Law degree at the University of Toronto and was called to the bar in Ontario in 1995.

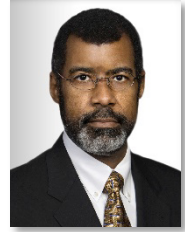
In addition to his work as a public servant, Mr Hannaford has been an adjunct professor in both the Faculty of Law and the Graduate School of Public and International Affairs at the University of Ottawa.

Name: William D. Magwood, IV

Organisation /Company: Nuclear Energy Agency (NEA)

Position: Director-General

Session: Welcome address and introductory remarks



Short Biography:

William D. Magwood, IV, has been the NEA's Director-General since 2014. Prior to that, he served as Commissioner of the US Nuclear Regulatory Commission (NRC), appointed by the US President and confirmed by the Senate. In 2005-2010, he provided independent strategic and policy advice on energy, environmental and technology policy issues. From 1998 to 2005, Mr Magwood was Director of Nuclear Energy at the US Department of Energy, where he launched several important initiatives, including the Generation IV International Forum (GIF). He began his career working as a scientist for Westinghouse and Edison Electric Institute. Mr Magwood holds Bachelor's degrees in Physics and English from Carnegie Mellon University and a Master of Fine Arts from the University of Pittsburgh.

Name: Rumina Velshi

Organisation /Company: Canadian Nuclear Safety Commission

Position: President and CEO

Session: Keynote speaker



Short Biography: Rumina Velshi was appointed President and Chief Executive Officer of the Canadian Nuclear Safety Commission in August 2018, and has extensive technical, regulatory and adjudication expertise in the energy industry.

Key priorities for Ms Velshi include ensuring that the CNSC and other nuclear regulators are ready to respond to innovation and accelerating technological change, are collaborating with a view to eventually harmonise regulatory reviews and are continuing to find ways to gain and enhance public trust.

In February 2020, Ms Velshi was appointed Chairperson of the Commission on Safety Standards (CSS), established by the International Atomic Energy Agency (IAEA), for a four-year term. Ms Velshi actively promotes careers in science, technology, engineering and mathematics (STEM), especially for young women.

Ms Velshi holds a Bachelor of Applied Science degree in civil engineering, a Master of Engineering degree in chemical engineering and a Master of Business Administration, all from the University of Toronto.

Name: Kimberly Petry
Organisation /Company: Office of Nuclear Energy, US
Department of Energy (DOE-NE)
Position: Acting Deputy Assistant Secretary Of The
Office Of Spent Fuel And Waste Disposition
Session: Keynote speaker



Short Biography: Kimberly Petry leads the Office of Spent Fuel and Waste Disposition as Acting Deputy Assistant Secretary as well as the Office of Integrated Waste Management as the Acting Director with responsibility for planning, evaluations and preparations for transport and disposal of spent nuclear fuel and high-level waste and the possibility of interim storage for spent nuclear fuel. She has also worked extensively in matters involving the management of national laboratory infrastructure and operations, and the promotion of environmental sustainability. She is a subject matter expert on waste management, green building, and sustainability for the Office of Nuclear Energy. Ms Petry earned her Ph.D. in Environmental Science from the University of Maryland, her MS in Environmental Science and Policy from Johns Hopkins University, and her BA from McDaniel College in French.

Name: Laurie Swami
Organisation /Company: Nuclear Waste Management
Organization (NWMO)
Position: President and CEO
Session: Keynote speaker



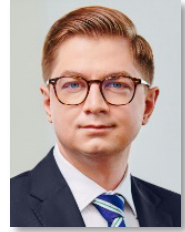
Short Biography: Laurie Swami is the President and CEO of the Nuclear Waste Management Organization (NWMO). She was appointed to the role in 2016 and is responsible for implementing Canada's plan for the long-term management of used nuclear fuel. Prior to joining the NWMO, Ms Swami spent 30 years at Ontario Power Generation (OPG), primarily in nuclear operations. She served as Senior Vice-President of Decommissioning and Nuclear Waste Management, overseeing the operation of nuclear waste management facilities and planning for the decommissioning of a nuclear generating facility. Ms Swami has extensive experience leading Environmental Assessment projects, including nuclear refurbishments. She has appeared before Joint Panel Reviews (CEA and CNSC) for the Darlington New Nuclear Project and OPG's Deep Geologic Repository Project. She holds a Bachelor of Science in Engineering Chemistry from Queen's University and a Master of Business Administration from the Schulich School of Business.

Name: Łukasz Młynarkiewicz

Organisation /Company: National Atomic Energy Agency (PAA)

Position: President

Session: Keynote speaker



Short Biography:

Łukasz Młynarkiewicz is a Doctor of Law, attorney-at-law, and academic lecturer. He devoted his doctoral dissertation to the institution of the fundamental decision in the process of preparation and implementation of investments in the field of nuclear power facilities. He is a graduate of the International School of Nuclear Law - a program organised by the OECD Nuclear Energy Agency and the University of Montpellier.

From September 2019 to May 2020, he has been acting President of the National Atomic Energy Agency (PAA). On 11 May 2020, he was appointed by the Prime Minister to the position of PAA President for a five-year term. In 2018-2019, he served as Director of the Department of Environmental Impact Assessment at the General Directorate for Environmental Protection.

He has been a representative of the Republic of Poland and First Deputy Governor in the Board of Governors of the International Atomic Energy Agency (IAEA) for the 2020-2022 term of office. He has served as Representative of the Republic of Poland in the Group of Heads of European Radiological Protection Competent Authorities (HERCA), Western European Nuclear Regulators Association (WENRA), European Nuclear Safety Regulators Group (ENSREG), Committee on Nuclear Regulatory Activities of the Nuclear Energy Agency (CNRA, NEA), Steering Committee of the Regulatory Cooperation Forum (RCF Steering Committee). He has furthermore been Correspondent of the Group of National Experts for EIA/SEA (Strategic Environmental Assessment) at the European Commission.

He was made a member of the National Environmental Impact Assessment Committee at the General Director of Environmental Protection and Secretary of the Working Group for Nuclear Safety and Legislation of the International Nuclear Law Association. He has also been made a member of the Central Laboratory for Radiological Protection, the Institute of Nuclear Chemistry and Technology and the Institute of Environmental Protection - National Research Institute.

He is the author of numerous scientific publications, including in the field of nuclear energy law, law, and administrative proceedings.

Name: Daniel H. Dorman

Organisation /Company: Nuclear Regulatory Commission (NRC)

Position: Executive Director for Operations

Session: Keynote speaker



Short Biography: Daniel H. Dorman was selected as the US NRC’s Executive Director for Operations in October 2021. He serves as the agency’s highest-ranking career position with responsibilities for overseeing the agency’s operational and administrative functions and serves as the chief operating officer.

He had previously served as the Deputy Executive Director for Reactor and Preparedness Programs, which included oversight over all four Regional Offices.

Mr Dorman joined the NRC in 1991 as a project engineer in the Office of Nuclear Reactor Regulation. He was promoted into the US Senior Executive Service in 2001 and served in positions of increasing responsibility. In 2014, he was appointed Regional Administrator for Region I, which conducts inspection and oversight of power reactors in the northeast and materials licenses in the eastern United States.

Prior to joining the NRC, Mr Dorman served as a submarine officer in the US Navy’s nuclear power program, with a subspecialty in joint intelligence operations.

Name: Patrick Landais

Organisation /Company: French Alternative Energies and Atomic Energy Commission (CEA), France

Position: High Commissioner for Atomic Energy, French Alternative Energies and Atomic Energy Commission (CEA), France



Session: Keynote speaker

Short Biography: Patrick Landais received his doctorate in geochemistry in 1981. After working for Elf and Cogema, he joined the CNRS (the French National Centre for Scientific Research) in 1987 and became Research Director in 1991.

In 2001, he was appointed Scientific Director of Andra, the French national agency for radioactive waste management. For his studies on geological disposal, he received a Grand Prix of the French Academy of Sciences. In 2005, he became member of the management board of the CNRS. He went back to Andra in 2006 before becoming Scientific Director of the French geological survey in 2013. In 2016, he returned to Andra as Chief Technology Officer. Since February 2019 he has been serving as High Commissioner for Atomic Energy at the French Alternative Energies and Atomic Energy Commission (CEA).

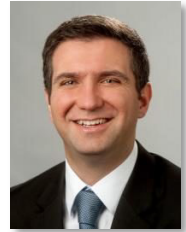
Session 1: Understanding the functioning of major SMR/advanced reactor technologies and fuel cycles

Name: Massimiliano Fratoni

Organisation /Company: University of California, Berkeley

Position: Professor

Session: 1.1 Overview of mature SMRs/advanced reactor technologies and associated fuel type



Short Biography: Massimiliano Fratoni is the Xenel Distinguished Professor in the Department of Nuclear Engineering at the University of California, Berkeley (UCB). He received an undergraduate degree in nuclear engineering from Università di Roma "La Sapienza" (Italy), and an MSc and PhD from the University of California, Berkeley. Prior to joining the Nuclear Engineering Department at UCB, he was Research Scientist at the Lawrence Livermore National Laboratory and held a faculty position at The Pennsylvania State University. Prof. Fratoni's main research interests are in sustainable nuclear energy through advanced reactors and advanced fuel cycles that maximise natural resource utilisation and minimise nuclear waste. Prof. Fratoni is author of more than 150 publications in the areas of advanced reactors and advanced fuel cycles and in 2018 received the American Nuclear Society Early Career Reactor Physicist Award. He is a member of the Generation IV Forum Education and Training Working Group and the advisory group of the NEA Global Forum on Nuclear Education, Science, Technology and Policy.

Name: Bret van den Akker

Organisation /Company: Ultra Safe Nuclear Corporation

Position: Director of Fuel Cycle Innovation, Ultra Safe Nuclear Corporation



Session: 1.2 Key attributes of SMR/advanced fuel type and design consideration and implications for decommissioning and radioactive waste management

Short Biography: Bret Patrick van den Akker is the Director of Fuel Cycle Innovation at Ultra Safe Nuclear Corporation (USNC), where he leverages his nuclear engineering and management consulting background to create value for USNC and its stakeholders. Mr van den Akker has a PhD in nuclear engineering from the University of California, Berkeley with an emphasis on applied mathematics and is a subject matter expert in the development and deployment of physical models that describe the interaction of the repository environment with used nuclear fuel (UNF) and high level waste, and the subsequent release and transport of radionuclides in the near- and far- field environments.

Before joining USNC, Mr van den Akker supported ARPA-E in the programme development life cycle for their M ONWARDS (Optimizing Nuclear Waste and Advanced Reactor Disposal Systems) programme, which provides funding for R&D dedicated to reducing the disposal impact of UNF from advanced reactors.

Name: Eric Williams

Organisation /Company: TerraPower

Position: VP of Engineering

Session: 1.2 Key attributes of SMR/advanced fuel type and design consideration and implications for decommissioning and radioactive waste management

Short Biography: Eric Williams is the Vice President of Engineering at TerraPower. In this role, he oversees the engineering associated with TerraPower's advanced reactors and medical isotope programs. He is currently head of Engineering for the Natrium project which is deploying an advanced Sodium Fast Reactor in Wyoming. Mr Williams has 23 years of experience in engineering and has spent the last 18 years developing nuclear power plant designs, with an emphasis on safety.



Name: Paul Thompson

Organisation /Company: New Brunswick Power Plant

Position: Senior Strategic Advisor

Session: 1.2 Key attributes of SMR/advanced fuel type and design consideration and implications for decommissioning and radioactive waste management

Short Biography: Paul Thompson is the Senior Strategic Advisor for the Advanced Reactor Development team at NB Power and has spent more than 43 years in the nuclear power industry. He was a member of the Steering Committee that developed the Pan-Canadian SMR Roadmap, the CEO SMR Forum Working group and the COG SMR Technology forum.

Mr Thompson previously held positions as the NB Power Deputy Chief Nuclear Officer, as well as the NB Power member on the Candu Owners Group Board of Directors. He has twice served as President of the Canadian Nuclear Society.



Name: Riccardo Chebac
Organisation /Company: Politecnico di Milano
Position: PhD student



Session: 1.2 Key attributes of SMR/advanced fuel type and design consideration and implications for decommissioning and radioactive waste management

Short Biography: Riccardo Chebac is a PhD candidate at Politecnico di Milano on decommissioning of graphite-moderated reactors within the H2020 Inno4Graph project. He is currently also working with the University of California Berkeley on graphite electrochemical decontamination. He has previously worked in the Radioactive Waste Management and Decommissioning Division of the Nuclear Energy Agency.

Session 2: Storage and transportation of spent fuel and radioactive waste in SMRs/advanced reactor designs

Name: Joe Faldowski
Organisation /Company: Orano Federal Services
Position: Chief Operations Officer
Session: Chair of Session 2



Short Biography: Joe Faldowski is the Chief Operations Officer of Orano Federal Services. Prior to that he held a variety of positions within Orano, including as project manager, projects director, and President/ COO of Columbiana Hi Tech. Prior to joining Orano 15 years ago, he started his work with the Department of Energy implementing technology transfer projects between the United Kingdom and the United States. He was an active participant of the Global Nuclear Energy Partnership (GNEP) and Next Generation Nuclear Plant (NGNP) programs for Orano before he moved to France where he worked in Orano's La Hague and Melox fuel cycle facilities. He holds Bachelors and Masters degrees in nuclear engineering from Penn State University and is pursuing a doctorate in Business Administration at the University of North Carolina at Charlotte.

Name: Amparo González Espartero

Organisation /Company: International Atomic Energy Agency (IAEA)

Position: Technical Lead Spent Fuel Management



Session: 2.1 Overview of work activities on fuel storage and transportation.

Short Biography: Amparo Gonzalez-Espartero has more than 30 years of professional experience in the nuclear energy field, mainly on spent fuel and radioactive waste management and on the development of advanced nuclear fuel cycle options for Gen-IV reactors, including SMRs.

Amparo obtained her PhD (1999), Master in Science (1989) and Bachelor in Science (1987) in chemistry at the Autónoma University of Madrid (UAM).

From 1991 to 2014, she worked for the Spanish National Laboratory CIEMAT in different capacities, as Senior Researcher, Section Head and Deputy Secretary General.

Since 2015, she has been working at the IAEA as Technical Lead of the Spent Fuel Management Team in the Department of Nuclear Energy. She has been scientific secretary of the IAEA International Conference on Fast Reactors (FR17-Yekaterinburg and FR22-Vienna) and the IAEA International Conference on Spent Fuel Management (2019). She has authored scientific papers in peer-reviewed journals, presented at conferences and led and contributed to IAEA publications.

Name: Rod McCullum

Organisation /Company: Nuclear Energy Institute (NEI)

Position: Senior Director Decommissioning and Used Fuel



Session: 2.1 Technical and economic feasibility of radioactive waste, storage, transport of reprocessed fuel

Short Biography: Rod McCullum has been working on regulatory issues at NEI since 1998. He has 35 years of nuclear engineering, licensing, management and regulatory policy experience. Currently, at NEI, he leads industry efforts to reduce business risks associated with used nuclear fuel management, commercial nuclear power plant decommissioning, and emergent material degradation issues by directing broad scope technical and regulatory programs. He has held positions in government (with the Department of Energy) and industry (at three commercial nuclear power plants). He has a Bachelor of Science degree in nuclear engineering (University of Cincinnati, 1985) and a Master of Business Administration degree (Lewis University, 2000).

Name: Robert Howard

Organisation /Company: Pacific Northwest National Laboratory

Position: National Technical Director, Integrated Waste Management

Session: 2.1 Overview of work activities on fuel storage and transportation.



Short Biography: Mr Howard is the National Technical Director of the Integrated Waste Management Project for the DOE-NE's Office of Spent Fuel and Waste Disposition. He is responsible for the management and technical integration of researchers and engineers from five national laboratories and multiple contractors working on national issues related to storage, transportation, and systems analysis and development of spent nuclear fuel and high-level radioactive waste.

Mr Howard has over 30 years of technical and project management experience related to the design, licensing, and operation of nuclear and radioactive waste management facilities. His experience includes the development of the licence application for the Yucca Mountain High Level Radioactive Waste Repository, and the development of hazard analyses, risk assessments, and systems design and analyses related to waste acceptance, monitored retrievable storage, transportation, and mined geologic disposal. He holds a Bachelor's degree in electrical engineering and a Masters in English from Virginia Tech and a Masters in civil and environmental engineering from the University of Nevada, Las Vegas. Mr Howard is a Project Manager at Pacific Northwest National Laboratory.

Name: Robin Taylor

Organisation /Company: UK National Nuclear Laboratory Limited

Position: Senior Fellow

Session: 2.2 Technical and economic feasibility of reprocessing radioactive waste, storage, transport of reprocessed fuel



Short Biography: Mr Robin Taylor is chair of the NEA Expert Group in Fuel Recycling & Waste Technology and a member of the Working Party on Advanced Fuel Cycles. He is a Senior Fellow at the UK National Nuclear Laboratory with nearly 30 years' experience in actinide separations, radiochemistry and nuclear materials management. He edited the book "Reprocessing & Recycling of Spent Nuclear Fuels" published in 2015 and has published more than 100 journal papers; he is an Honorary Professor at the University of Lancaster.

Name: Kenneth Marsden
Organisation /Company: Idaho National Laboratory



Position: National Technical Director for the Material Recovery and Waste Form Development Campaign

Session: 2.2 Technical and economic feasibility of reprocessing radioactive waste, storage, transport of reprocessed fuel

Short Biography: Ken Marsden received his education in nuclear engineering and material science from Texas A&M University and the University of Idaho.

He worked at Argonne National Laboratory-West between 1995 and 2005 and has been with Idaho National Laboratory since 2005.

His technical experience centers around the research, development, and operation of fuel cycle processes. As a part of these efforts, he has worked on chemical and electrochemical processes and fuel fabrication. Mr Marsden has led a fuel cycle research organisation of approximately 30 staff starting in 2017.

Mr Marsden recently served as the Technical Director for the recent Joint Fuel Cycle Study between the United States and Korea for the DOE Office of Nuclear Energy, and he is currently National Technical Director for the Material Recovery and Waste Form Development Campaign.

Name: Bertrand Morel

Organisation /Company: Orano

Position: Research and Development Director

Session: Session 2.2 Technical and economic feasibility of reprocessing radioactive waste and storage and transport



Short Biography: Mr Bertrand Morel is Research and Development Director of Orano, a multinational industrial conglomerate that focuses on nuclear power. He has been located in Paris, France, since 2015. He is also an associate Professor at the Ecole Centrale of Lille, France.

Before assuming his current position, Morel was head of R&D of the front end activities at the Orano site in Pierrelatte. He was also manager of the analytical laboratory at the Comurhex Pierrelatte plant from 1995 to 2001. He previously had been an R&D scientist for the Commissariat à l’Energie Atomique, Grenoble, France, and an R&D scientist for Pechiney, Voreppe, France.

Mr Morel earned his PhD in material science from the University of Bordeaux, and his Master’s in analytical chemistry and Bachelor’s degree from the École Supérieure de Physique et de Chimie Industrielles de la Ville de Paris. He holds seven patents and has written several publications.

Name: Stuart Arm

Organisation /Company: Pacific Northwest National Laboratory



Position: Senior Technical Advisor

Session: 2.2 Technical and economic feasibility of reprocessing radioactive waste, storage, transport of reprocessed fuel

Short Biography: Stuart Arm is a graduate of Imperial College of Science, Technology and Medicine, London, and has 30 years of engineering and management experience in the UK and US nuclear industries. He is currently Senior Technical Advisor for radiochemical flowsheets at the Pacific Northwest National Laboratory. The first years of his career were spent with the United Kingdom Atomic Energy Authority developing and evaluating process technologies for advanced recycling of used nuclear fuel. Mr Arm has lived in the United States since 1994 working and leading several nuclear waste management and fuel cycle projects. For example, as national interest in nuclear energy renewed, Mr Arm joined EnergySolutions in 2007 as their Separations Technology Director with a focus on the company's nuclear fuel cycle activities. Since 2019, Mr Arm has been managing several nuclear fuel cycle projects at PNNL, most notably concerned with the management of spent nuclear fuel from advanced reactors.

Session 3: Radioactive waste and decommissioning in SMRs/advanced reactor technologies

Name: Ramzi Jammal

Organisation /Company: Canadian Nuclear Safety Commission (CNSC)

Position: Executive Vice-President and Chief Regulatory Operations Officer

Session: 3.1 Licensing and regulatory requirements of spent fuel and waste management for SMRs/advanced reactors



Short Biography: Ramzi Jammal has worked for the CNSC since 1998. He has 35 years of experience in the nuclear industry, combining management skills with scientific expertise and representing the CNSC in various international activities such as co-chairing of the IAEA Fukushima report and leading Canadian delegations to the Safety Conventions.

He sits on the IAEA Commission on Safety Standards. He was President of the CNS 2017.

In 2020 he received the Canadian Nuclear Society Award. Mr Jammal has been instrumental in preparing the CNSC to regulate SMRs, modernising its regulatory framework and collaborating internationally on advanced reactor and small modular reactor designs. This work is intended to harmonise international standards and requirements to regulate SMRs effectively and efficiently.

Name: Nancy Greencorn

Organisation /Company: Canadian Nuclear Safety Commission (CNSC)

Position: Director, Wastes and Decommissioning Division

Session: 3.1 Licensing and regulatory requirements of spent fuel and waste management for SMRs/advanced reactors



Short Biography: Nancy Greencorn is the Director of the Wastes and Decommissioning Division (WDD) at the Canadian Nuclear Safety Commission (CNSC). She has been with the CNSC since 2016 and has held roles in the WDD as well as the Uranium Mines and Mills Division.

Ms Greencorn is a member of the NEA Regulators Forum, Radioactive Waste Management Committee and Committee on Decommissioning and Legacy Management. She is a member of the IAEA Waste Safety Standards Committee and has participated as an expert in several IAEA Integrated Regulatory Review Missions and workshops. She is Canadian Standards Committee vice-chair on waste management as well as committee member for decommissioning.

Prior to joining the CNSC, Ms Greencorn was a Project Manager and Field Engineer at Atomic Energy of Canada Limited/Canadian Nuclear Laboratories in Decommissioning & Waste Management.

Ms Greencorn holds a Master's of Science degree in chemical engineering from the University of New Brunswick.

Name: Shana Helton

Organisation /Company: US Nuclear Regulatory Commission

Position: Director, Division of Fuel Management



Session: 3.1 Licensing and regulatory requirements of spent fuel and waste management for SMRs/ advanced reactors

Short Biography: Ms. Shana R. Helton is the Director of the Division of Fuel Management in the Office of Nuclear Material Safety and Safeguards at the US Nuclear Regulatory Commission. She is responsible for the development and implementation of NRC’s regulatory activities related to the front- and back-ends of the nuclear fuel cycle, including uranium conversion, enrichment, deconversion, and fuel manufacturing; spent fuel storage and transportation; transportation of radioactive materials; control and accounting for special nuclear material, and implementation of domestic and international safeguards at NRC-regulated facilities. Since joining the US Nuclear Regulatory Commission (NRC) in 2002, she has served in technical and leadership positions of increasingly responsibility in the reactor and materials safety and security areas. Ms Helton received a Bachelor’s degree in nuclear engineering from the University of Illinois and a Master’s degree in nuclear engineering and radiological sciences from the University of Michigan.

Name: Ville Koskinen

**Organisation
/Company:** STUK

Position: Senior inspector

Session: 3.1 Licensing and regulatory requirements
of spent fuel and waste management for
SMRs/ advanced reactors

**Short
Biography:** Mr Koskinen received his Master's degree in 2008 from Lappeenranta University of Technology, specialising in environmental technologies in energy production. He has since been working in the Finnish nuclear waste management sector in various positions. For the past five years, Mr Koskinen has been working at STUK, the Radiation and Nuclear Safety Authority of Finland. His work at STUK has included management overview of deep geological repositories, research reactor decommissioning, and low- and intermediate-level waste (LILW).



Name: William J. Boyle

Organisation /Company: Office of Nuclear Energy, US Department of Energy

Position: Director, Office of Spent Fuel & Waste Science and Technology



Session: 3.2 Operational and design optimisation consideration related to decommissioning and radioactive waste management for SMRs/advanced reactors and 3.3 Operational feedback on managing and disposal of existing waste streams and how some of these concepts can be applied in future endeavours, such as SMRs/advanced reactors

Short Biography: Mr William J. Boyle is the Director of the Office of Spent Fuel & Waste Science and Technology (SFWST) in the US Department of Energy's (DOE) Office of Nuclear Energy (NE). The mission of SFWST is to conduct research and technology development to enable storage, transportation, and disposal of used nuclear fuel and wastes generated by existing and future nuclear fuel cycles.

Before joining NE, Mr Boyle was the Director of the Regulatory Authority Division (RAD) in the DOE's Office of Civilian Radioactive Waste Management (OCRWM). The mission of the RAD was to develop and support the License Application (LA), the environmental impact statement, and maintain a certified Licensing Support Network (LSN) that meets NRC regulatory requirements, for the Yucca Mountain Project.

Name: Prakash Narayanan

Organisation /Company: Orano TN Americas

Position: Chief Technical Officer

Session: 3.2 Operational and design optimisation consideration related to decommissioning and radioactive waste management for SMRs/ advanced reactors



Short Biography: Prakash Narayanan is the Chief Technical Officer for Orano TN Americas, part of the Nuclear Packaging & Services Business Unit of Orano. In this role, over the past four years, he has been responsible for providing technical direction on TN Products and Technologies. He is also responsible for design & fabrication engineering, licensing, R&D and intellectual property management associated with Orano TN products and services.

Mr Narayanan has over 23 years of experience working in the nuclear power industry, including 21 years at Orano TN, with technical and management positions in the design engineering group. His area of specialisation is the development of licensing methods for criticality and shielding analysis, associated with all aspects of the nuclear fuel cycle, particularly burnup credit for storage and transportation.

Mr Narayanan obtained his Master's degree in nuclear engineering from North Carolina State University in 1999.

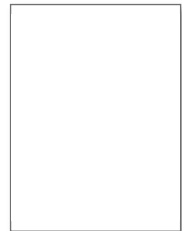
Name: Gordon Petersen
Organisation /Company: Idaho National Laboratory



Position:
Session: 3.2 Operational and design optimisation consideration related to decommissioning and radioactive waste management for SMRs/ advanced reactors

Short Biography: Mr Gordon Petersen is a Spent Fuel Analyst at Idaho National Laboratory in the Nuclear Science & Technology Directorate, where he works in the Used Fuel Management Group. In this role, Mr Petersen provides technical support in the areas of spent nuclear fuel (SNF) storage, transportation, and disposal. His education includes a Bachelor's, Master's, and PhD in nuclear engineering from the University of Tennessee. His subject matter expertise includes advanced reactor waste forms, management of SNF (storage, transportation and disposal), SNF system analysis and economic evaluations, nuclear criticality analysis, and systems modeling.

Name: Anne Saturnin
Organisation /Company: CEA



Position: Senior Expert
Session: 3.2 Operational and design optimisation consideration related to decommissioning and radioactive waste management for SMRs/ advanced reactors

Short Biography: Anne Saturnin is a research engineer at the CEA, the French Alternative Energies and Atomic Energy Commission, with more than 30 years of experience in the nuclear field (R&D studies, technical co-ordination, and prospective studies). She is in charge of system studies, mostly concerned with radioactive waste issues.

Name: Megan Harkema

**Organisation
/Company:** Vanderbilt University

Position: Graduate Research Assistant

Session: 3.2: Operational and design optimisation consideration related to decommissioning and radioactive waste management for SMRs/ advanced reactor technologies



**Short
Biography:** Ms Harkema is a fifth-year PhD candidate studying nuclear environmental engineering at Vanderbilt University. She received a Bachelor's degree in nuclear engineering from the University of Michigan in 2018. Her research interests include developing/applying novel safety analysis techniques as part of advanced reactor design and leveraging historical information/lessons learnt from DOE test reactor operation, surveillance and maintenance, and deactivation and decommissioning for the design of advanced reactor systems, particularly molten salt reactors (MSRs). She is also engaged in risk characterisation as part of the CRESP (Consortium for Risk Evaluation with Stakeholder Participation) risk review of high hazard facilities in the DOE's Office of Environmental Management (DOE-EM) portfolio at the Oak Ridge Reservation.

Name: Lindsay Krall

Organisation /Company: Former Center for International Security and Cooperation (CISAC), Stanford University

Position: Former MacArthur postdoctoral fellow



Session: 3.2 Operational and design optimisation consideration related to decommissioning and radioactive waste management for SMRs/ advanced reactors

Short Biography: Dr Lindsay Krall was a MacArthur Postdoctoral Fellow at CISAC from 2019 to 2020, where she assessed the technical viability of concepts to dispose of spent nuclear fuel in deep boreholes and characterised the radioactive waste streams that might be generated in advanced fuel cycles. She holds a Bachelor's degree in industrial and operations engineering from the University of Michigan and a PhD in geochemistry from Stockholm University. She currently lives in Stockholm and works as a geochemist in the Research and Safety Analysis division of the Swedish Nuclear Fuel and Waste Management Company. Her focus is on redox reactions in crystalline rock groundwater systems, in particular those involving uranium and iron at the Forsmark site.

Name: Rebecca Tadesse

Organisation /Company: Nuclear Energy Agency (NEA)

Position: Head of the Division of Radioactive Waste Management and Decommissioning

Session: 3.3 Operational feedback on managing and disposal of existing waste streams and how some of these concepts can be applied in future endeavours, such as SMRs/advanced reactors



Short Biography: Rebecca Tadesse is the head of the NEA Division of Radioactive Waste Management and Decommissioning (RWMD). Furthermore, she has a significant role in the co-ordination of NEA activities related to the decommissioning and clean-up of the Fukushima Daiichi site.

Prior to joining the NEA, Ms Tadesse served as Chief of the Radiation Protection Branch in the Office of Nuclear Regulatory Research at the United States Nuclear Regulatory Commission. Ms Tadesse has over 27 years of domestic and international experience in the operation and radiation safety of research reactors, fuel fabrication facilities, nuclear power plants and biomedical research facilities. Ms Tadesse also served as Senior Policy Advisor for Commissioners and Senior Operational Assistant in the Executive Directors Office.

In addition, Ms Tadesse was the Chief of the Material Decommissioning Branch, where she was responsible for managing the licensing and the oversight of complex decommissioning nuclear facilities. She has also held numerous positions in the reactor, material and fuels area at the Nuclear Regulatory Commission (NRC) as Health Physicist, Project Manager, and Technical Assistant to the Director. Prior to her appointment at the NRC, she worked for private industry and the federal government, as a Radiation Physicist at Common Wealth Edison Nuclear Corporation, General Atomics defense Contractor Company, and US Food and Drug Administration.

Ms Tadesse is a US national and holds a B.S. degree in radiation physics from Purdue University and an M.S. degree in environmental science/policy from Johns Hopkins University.

Name: Shaun Roberts
Organisation /Company: Nuclear Waste Services Limited



Position: Waste Management Director

Session: 3.3 Operational feedback on managing and disposal of existing waste streams and how some of these concepts can be applied in future endeavours, such as SMRs/advanced reactors

Short Biography: Shaun Roberts is the Waste Management Director for the UK Nuclear Waste Services Limited, part of the UK Nuclear Decommissioning Authority. He has accountability for the provision of packaging and disposal advice to those planning to or currently generating radioactive waste and spent fuel that will require geological disposal in the United Kingdom. Mr Roberts has 28 years of experience in the UK nuclear industry with experience in power generation, decommissioning, waste management, defence, and healthcare sectors. He has supported delivery of UK geological disposal since 2014.

Name: Ursula Carvajal

Organisation /Company: Idaho National Laboratory

Position: Spent Nuclear Fuel Analyst



Session: 3.3 Operational feedback on managing and disposal of existing waste streams and how some of these concepts can be applied in future endeavours, such as SMRs/advanced reactors

Short Biography: Ursula Carvajal is a Spent Fuel Analyst for the Idaho National Laboratory's used fuel program. Her current projects focus on contributing to a broad range of spent fuel-related projects, including but not limited to: DOE-NE's Spent Fuel and Waste Disposition program, DOE-EM's Technology Development activities, and industry/vendor collaborations.

Ms Carvajal has a PhD in applied sciences from Delft University of Technology, a M.S. in material engineering and a B.S. in chemistry from the University Complutense of Madrid, Spain.

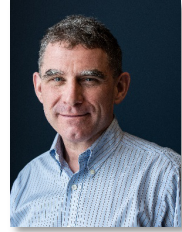
Ms Carvajal has held positions at a range of domestic and international companies, including interning at the Joint Research Centre (JRC) of the European Commission in Karlsruhe, Germany; serving as a postdoc in both the Materials Science and Technology Division and the Centre for Integrated Nanotechnologies at Los Alamos National Laboratory in Los Alamos, New Mexico; managing several nuclear projects at Tractebel-Engie in Brussels, Belgium; and working as a scientific / technical project officer at the JRC in the Euratom Coordination unit on the shipment of radioactive waste & spent fuel, waste management, and decommissioning and dismantling activities.

Name: Jim McKenna
Organisation /Company: Atomic Energy of Canada Limited (AECL)

Position: Director Strategic Materials

Session: 3.3 Operational feedback on managing and disposal of existing waste streams and how some of these concepts can be applied in future endeavours, such as SMRs/advanced reactors

Short Biography: Jim McKenna is Director, Strategic Materials with Atomic Energy of Canada Limited (AECL) at the Chalk River Laboratory. He has been with AECL for 20 years, where he has filled several positions including: Project & Engineering Managers, Director of Waste Management Operations and Director of Facilities Decommissioning. Since 2012, Mr McKenna has been directly responsible for Canada's Repatriation Programme. He retired as a Senior Officer from the Canadian Army after a 21-year career and is a professional engineer with a MAsc in structural engineering.



Name: Paula Keto

**Organisation
/Company:** VTT

Position: Senior Scientist

Session: 3.3 Operational feedback on managing and disposal of existing waste streams and how some of these concepts can be applied in future endeavours, such as SMRs/advanced reactors

**Short
Biography:** Paula Keto is a Senior Scientist at the VTT Technical Research Centre of Finland with a background in geology. She has more than 20 years of experience working in the Finnish nuclear waste management program, including leading roles in the research, development and design of the engineered barrier systems (EBS) in the Onkalo deep geological repository (DGR). Her main expertise is in the design and performance analysis of clay-based engineered barriers and in establishing design basis for different waste management concepts.

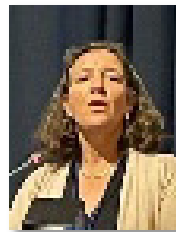
Recently she and her colleagues at VTT performed a small, introductory study on the management of spent fuel and LILW from small modular reactors (SMR) in Finland. This study was carried out under the Finnish Research Program on Nuclear Waste Management KYT2022.



Name: Virginie Wasselin

Organisation /Company: Andra

Position: Head of waste management strategy department



Session: 3.3 Operational feedback on managing and disposal of existing waste streams and how some of these concepts can be applied in future endeavours, such as SMRs/advanced reactors

Short Biography: Ms Virginie Wasselin has 20 years of service in the field of waste management safety and strategy, including 10 years at the manager level. These activities encompass all the nuclear waste produced in France, including those from research, industry, medicine and research reactors. Since 2007 she has been nominated to participate in the French working group on the National Management Plan for Radioactive Materials and Waste (PNGMDR).

Session 4: Key considerations for communities, Indigenous peoples and stakeholder involvement

Name: Emily Whetung-MacInnes

Organisation /Company: Curve Lake First Nation

Position: Chief Emeritus

Session: 4.1 Indigenous community/Tribal Nation perspectives on the potential deployment of SMRs and advanced reactor technologies and Session Chair

Short Biography:

Elected as Chief of Curve Lake in 2019, Chief Emily is passionate about the rights of First Nations people, ensuring her community has every opportunity to thrive and protecting the environment for future generations, protecting treaty rights, finding ways to ensure sustainable economic advancement, and building healthy relationships between First Nations and Canadians.

Having picked up on 40 years of advocating for access to clean drinking water for Curve Lake, Chief Emily, as one of the representative plaintiffs, settled a national class action with the Government of Canada providing for CAD 8 billion to end long-term water advisories on First Nations across Canada before 2030.

Chief Emily has recently decided not to seek re-election, instead focusing on supporting First Nations in different ways. She continues to serve on the Anishinabek Nation Leadership Council and as the Vice-Chair to the Indigenous Advisory Council for SMR Action Plan.



Name: Jessica Perritt

Organisation /Company: Indigenous Innovation, Turtle Island Institute

Position: Director of Indigenous Innovation

Session: 4.1 Indigenous community/tribal nation perspectives on the potential deployment of SMR and advanced reactor technologies



Short Biography: Jessica Perritt is Bear Clan and a proud Anishinaabe-kwe from Neyaashiingmiing First Nation located in the Saugeen Ojibway Nation traditional territory on the shores of the Georgian Bay in Southern Ontario. Mr Perritt brings over 15 years' experience of Indigenising organisational culture, implementing reconciliation within corporate policy and engaging with Indigenous communities. She holds a Bachelor of Science degree in mathematics and physics from the University of Alberta. As the Director of Indigenous Innovation at Turtle Island Institute, she hopes to amplify the sophistication of Indigenous knowledge in programming that is grounded in relationships, ceremony and centred in spiritual learning.

She joined the Turtle Island Institute team on a 13-month leave from the Nuclear Waste Management Organization (NWMO). Jessica contributes to the field of systems change by leaning into the richness of Indigenous knowledge and leverages the principles of respect, reciprocity and relationship in practical ways to influence institutions, policy and organisations.

Name: Talia Martin

Organisation /Company: Energy for the Shoshone Bannock Tribe in Idaho

Position: Director

Session: 4.1 Indigenous community/tribal nation perspectives on the potential deployment of SMR and advanced reactor technologies – (video)



Short Biography: Talia Martin is a Shoshone-Bannock Tribal member and has served as the Program Director of the Shoshone-Bannock Tribes Tribal Department of Energy since 2015. She oversees the Energy Resources Program, which is responsible for developing a tribal energy strategy and implementing renewable energy technologies for the Fort Hall Indian Reservation. She also serves as a tribal liaison for government-to-government functions and the administrator of the Agreement in Principle between the US Department of Energy – Idaho Operations and the Shoshone-Bannock Tribes of Fort Hall, ID. She participates at the national, state, and local levels as a technical representative on the Shoshone-Bannock Tribes’ interest in nuclear energy and legacy waste environmental clean-up issues. She is a member of the Nuclear Energy Tribal Working Group (NETWG) and Co-Chair of Tribal Issues on the States and Tribes Government Working Group (STGWG). She serves her community as a board member on the DOE-EM Idaho Clean-up Project Citizens Advisory Board, Co-Chair on the Boise State University Tribal Advisory Board and Treasurer for the Chief Tahgee Elementary Academy School Board.

Ms Martin received a Bachelor’s degree in chemistry and a Master’s degree in pharmaceutical chemistry, both from the University of Kansas. Before that, she attended Haskell Indian Nations University in 2003, where she received an Associate of Science in Natural Sciences.

Name: Rebekah Wilson

**Organisation
/Company:** NWMO

Position: Reconciliation Coordinator

Session: 4.1 Indigenous community/tribal nation perspectives on the potential deployment of SMR and advanced reactor technologies



Short Biography: Rebekah Wilson is a proud citizen of the Metis Nation of Ontario, with roots in Drummond Island and the Georgian Bay region of Ontario (Penetanguishene). Ms Wilson began her career managing and implementing an Indigenous youth sport for development program, supporting First Nation, Metis and Inuit youth to realise their potential through sport leadership. She has also worked in negotiations between First Nations and municipal communities on solid waste management. Ms Wilson now works with the Nuclear Waste Management Organization in the Indigenous Relations department. In this role, she works with an independent advisory body to the organisation comprised of First Nation and Metis elders and youth who provide advice and guidance on Reconciliation and Indigenous Knowledge work. She also co-develops and co-delivers training to fellow employees on reconciliation to help her colleagues foster positive relationships with Indigenous communities across Canada.

Name: Julie Mecke

Organisation /Company: Natural Resources Canada

Position: Senior Policy Advisor, Radioactive Waste

Session: 4.2: Good practices on stakeholder engagement and dialogue including the intergenerational aspect of SMRs/ advanced reactors



Short Biography: Julie Mecke has over 20 years of experience in radioactive wastes and decommissioning.

She is currently the Senior Policy Advisor of Radioactive Waste at Natural Resources Canada. In this position, she manages the administration and oversight of the Nuclear Fuel Waste Act and leads Indigenous engagement on Canada's Radioactive Waste Policy modernisation; she is a member of NEA RWMC and the Forum for Stakeholder Confidence; and she is Co-chair of the Federal/Provincial Radioactive Waste Working Group on management of off-site radioactive waste from a nuclear emergency.

Previously, Ms Mecke was a Senior Project Officer, Radioactive Waste and Decommissioning, Canadian Nuclear Safety Commission. She managed the regulator's early involvement in licensing of a deep geological repository for Canada's spent fuel and developed and led an extension to the Indigenous and community outreach program. She managed Canada's National Report for the Joint Convention on the Safety of Spent Fuel and the Safety of Radioactive Waste and was part of Canada's delegation for five international peer review meetings. Ms Mecke also leads licensing and compliance activities of radioactive waste management facilities, decommissioned uranium mines and remediation of radioactive contaminated lands.

Name: Candice Jackson

Organisation /Company: Nuclear Energy Division, NRCan

Position: Deputy Director

Session: 4.2: Good practices on stakeholder engagement and dialogue including the intergenerational aspect of SMRs/ advanced reactors

Short Biography: Candice Jackson brings over a decade of expertise in the energy sector, with her roles ranging from oil and gas development to electricity system transformations to climate energy policy in the private, public, and non-profit sectors. Ms Jackson has experience with Canada's natural resource sector through her roles with ExxonMobil and Alberta's Department of Energy, having forged pathways for young female professionals in up and downstream extractive services. She made critical contributions to the modernisation of Alberta's electricity grid and led the team responsible for the implementation of Alberta's coal phase out. She has also been at the forefront of global climate change action through her leadership with the Powering Past Coal Alliance, co-chaired by the Governments of Canada and the United Kingdom. She continues to contribute to climate ambitions and energy system transformations through her role as Deputy Director within the Nuclear Energy Sector at Natural Resources Canada.



Name: Eric McGoey

Organisation /Company: Global First Power

Position: Director, Engagement and Communications

Session: 4.2: Good practices on stakeholder engagement and dialogue including the intergenerational aspect of SMRs/ advanced reactors

Short Biography: Eric McGoey is a Director at both Ontario Power Generation and Global First Power, specialising in Indigenous and community engagement, communications, government relations, and inter-utility coordination related to the development and deployment of SMRs in Canada. With experience in government, mining, and energy, Mr McGoey is passionate about the clean energy transition and economic reconciliation with Indigenous peoples. As a volunteer, he serves on the Board of Cycle Toronto, a safe-streets advocacy charity, and has worked on municipal and provincial election campaigns for nearly 30 years.



Name: Duane Bratt
Organisation /Company: Mount Royal University
Position: Professor (Political Science)



Session: 4.2: Good practices on stakeholder engagement and dialogue including the intergenerational aspect of SMRs/ advanced reactors

Short Biography: Duane Bratt is a political science Professor in the Department of Economics, Justice, and Policy Studies at Mount Royal University (Calgary, Alberta). He teaches in the area of international relations and Canadian public policy. His primary research interest is Canadian nuclear policy.

Among his recent publications, he has served as co-editor of *Orange Chinook: Politics in the New Alberta* (University of Calgary Press, 2019) and of *Readings in Canadian Foreign Policy: Classic Debates and New Ideas* (Oxford University Press, 2015). He is author of *Canada, the Provinces, and the Global Nuclear Revival* (McGill-Queen's University Press, 2012).

Current projects include co-editing the forthcoming book *Blue Storm: The Rise and Fall of Jason Kenney* (University of Calgary Press, 2023) and a political analysis of SMRs. Professor Bratt is also a regular commentator on political events.

Name: Elizabeth (Betsy) Forinash

Organisation /Company: US DOE, Office of Environmental Management

Position: Deputy Assistant Secretary for Waste and Materials Management



Session: Session 4: Key considerations for communities, Indigenous peoples and stakeholder involvement. Session Chair

Short Biography: Betsy Forinash is the Deputy Assistant Secretary for Waste and Materials Management Policy in the US Department of Energy's (DOE) Office of Environmental Management. In that role, she supports national DOE programs for low-level, intermediate, and high-level radioactive waste; spent nuclear fuel; nuclear materials; and packaging and transportation.

Ms Forinash previously led DOE programs on radioactive waste management, deactivation & decommissioning, environmental remediation and sustainability. She spent 15 years in regulatory programs at the US Environmental Protection Agency, including the Waste Isolation Pilot Plant and Yucca Mountain nuclear waste repositories and on radioactive air emissions, contaminated site clean-up, and radiological emergency preparedness. She also worked for five years at the OECD Nuclear Energy Agency, supporting strategic and technical aspects of radioactive waste disposal.

Ms Forinash holds a Bachelor's degree from Duke University and a Master's from Northwestern University, both in civil engineering.



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