wnti

WNTI TODAY 2024

CELEBRATING 25 YEARS OF
KEEPING NUCLEAR MOVING

CONTENTS

MARTIN PORTER SECRETARY GENERAL

2023 marked the 25th Anniversary of the founding of our WNTI.

It is a testament to our member community that we not only remain relevant but are held in the highest regard by our many stakeholders. Over the past 25 years, WNTI has achieved numerous successes through its stakeholder events, publications and technical problem-solving. The members' drive to deliver credible solutions for the transport of radioactive materials continues to define our WNTI and secure its future. Engineering challenges such as the 48Y cylinder, the current UX30/DN30 transition, new package proposals and influencing regulatory/policy revision, to name a few, have all contributed to positioning our WNTI as the leading global voice of nuclear transport. Long may this continue!

In 2023, WNTI hosted and celebrated PATRAM 22 (in 2023!). It was fantastic to see so many attendees sharing excellent technical content at the rescheduled event in Juan Les Pins. The splendid backdrop of the French Riviera provided the perfect setting for this global transport symposium, which was much needed after the recess due to the global pandemic. The Antipolis Conference Centre was an ideal venue for 'Bringing Transport Together,' and the week was packed with keynote addresses, technical sessions, plenaries and panels. The evening social events allowed everyone to relax and reconnect. I would like to take this opportunity to commend my partners on the Executive Committee: Igor Le Bars, Frederic Ledroit, Cary Crawford, Jeff England, Sophie Videment, Anne Presta, Amy Northage, Emily Midgley, Chris Chen, Henry-Jacques Neau and Patricia Hamel-Bloch.

Despite the challenges of rescheduling, they provided us with a memorable and fulfilling Symposium. Now, we hand the baton to our Co-Hosts, the Institute of Nuclear Material Management (INMM), and wish them all the best for their PATRAM 2025 in San Antonio, Texas!

Post-PATRAM, we continue to work towards providing the best value to our members by driving the highest standards of safety and security in the field of radioactive material transport. Our Semi-Annual Members Meetings, Technical Workshops and Publications enable our technical community to share best practices while also connecting organisations to find solutions to the many challenges associated with transporting radioactive materials. Undoubtedly, our strong relationships with regulatory bodies and key stakeholders such as IAEA, IMO, ISO, OECD-NEA, INMM, WNA, WINS, nuclearеurope and NNWI contribute to our continued success.

"It is our relationships and the long-term commitment of our members that provide us with the continuity and credibility to remain influential now and in the future."

Towards the end of 2023, we welcomed GSG, Eskom and newcleo as new joining members. With nearly 50 organisations as members and a substantial list of prospective members waiting in the wings, our membership continues to grow at a time of renewed interest in nuclear energy. This growth will hopefully ensure the prosperity of our WNTI for many years to come. However, we must not lose sight of the challenges that this growth brings. We must ensure that we pass on all our knowledge to the next generation and diversify our membership to meet the needs of future nuclear developments. If we succeed in doing so, we will see returns on our investments through increased attendance at our events, renewed interest in our publications and stronger relationships.

Leading WNTI during its 25th Anniversary year has been extremely fulfilling for me, especially after witnessing everyone enjoy PATRAM following the turbulence caused by the pandemic. Reaching out to all our members and stakeholders through PATRAM further emphasised the value of working together to secure the continued success of our WNTI. The commitment you have shown in this endeavour is highly appreciated by the entire team. Thank you!

- Martin Porter
WNTI Secretary General

/05

CHRIS WATSON WNTI CHAIR

/07

Over the past 25 years, WNTI has remained stable thanks to leadership from within our technical community.

Our progress can be attributed significantly to the crucial support of our Founder Members: the Federation of Electric Power Companies (FEPC), Orano and the Nuclear Decommissioning Authority Group (NDA), and the organisations they evolved from. Their active contributions have ensured consistency in governance and have been instrumental in maintaining WNTI's consistent voice, a voice that has tenaciously advocated for and maintained high industry standards.

As interest in nuclear grows, so too does membership in WNTI. It's crucial that we embrace this interest and provide value to all our members. Our portfolio of interests is expanding, as evidenced by recent successful events such as the recentl workshop, Advanced Reactors: Transportation and the Front-end Fuel Cycle for HALEU, held in Washington DC. The diversity of our members has necessitated a diverse set of demands. This is where the importance of our Portfolio Board comes in; integrating the assorted needs of our members, prioritising actions in sync with available resources and funds, all aimed at achieving advantageous outcomes. These can range from devising technical guides, lobbying for regulatory amendments, organising specific seminars, global symposia and presenting to countries that are newly entering the field, all while ensuring WNTI continues to be the the authoritative voice of nuclear transport.

To realise these ambitious goals, we must keep evolving as an organisation. drawing on professional and technical capabilities as required. We must represent our global membership both by listening and taking action. As our membership diversifies, our organisation must also diversify, as should the attendees of our events. We strive to be even more inclusive so that collective expertise can be shared with future generations. We must evolve our services to meet the needs and expectations of our members. All of this is possible because of the strong foundation that WNTI has established over 25 years of maintaining safe and secure nuclear transport.

As we move forward, I want to express gratitude to all those who have contributed to WNTI's success to date. Many of you have generously volunteered your time and expertise to maintain the high standards that we value highly. I look forward to embracing increased involvement from the next generation, who will drive WNTI forward.

- Chris Watson
WNTI Chair

KEEPING NUCLEAR MOVING FOR 25 YEARS

WELCOME TO THIS SPECIAL EDITION OF WNTI TODAY, CELEBRATING 25 YEARS OF WNTI.

/08

This edition marks an exciting milestone for us, commemorating a quarter of a century of unflagging commitment to progress, innovation and the evolution of industry standards. We have gathered a significant number of triumphs since our formation, becoming a trusted ally for industry stakeholders across the globe. This anniversary publication provides a curated snapshot of our current work and previous achievements of our journey. Moreover, we look forward with eager anticipation to the thrilling path that lies before us, committed to remain a formidable presence driving the future of safe and secure nuclear transport. Alongside our look back and glance forward, this special edition contains heartfelt messages from our partners and industry peers, graciously congratulating us on reaching this 25-year milestone. Each message highlights the collective recognition and appreciation for our dedication to creating valuable partnerships and lasting improvements in our field. As we flip open the pages of this special edition, let us toast to the power of perseverance, the excitement of ambition and the immeasurable potential of the next 25 years.

The World Nuclear Transport Institute (WNTI) began with a mission that was grounded in unwavering principles. Since its inception, WNTI has been a driving force in the nuclear transport industry, promoting and maintaining global standards in nuclear transport security and safety. As the industry expanded and the need for safe transport grew, WNTI diversified its membership and embraced opportunities in a changing world. Today, WNTI continues to stay at the forefront of new technology and remain relevant by upholding its founding principles of excellence, collaboration and innovation. These principles ensure a secure and sustainable future for the global nuclear transport community.

WNTI is an essential resource for its members. Its primary focus is on maintaining safe and secure transportation of radioactive materials. The organisation also serves as a forum for technical community members to share best practices and connect with one another to find solutions. One of WNTI's strengths lies in its relationships with regulatory bodies and key stakeholders. This has helped the organisation to maintain credibility and provide continuity over the years.

The demand for safe and secure nuclear transport has never been greater, and WNTI is ready to meet this challenge. Nuclear energy is an important player in providing reliable, low-carbon energy for the future, working in conjunction with renewable energy sources. This is particularly true as we continue to build gigawatt scale reactors and explore options for SMRs and other advanced technologies that require specialised transport packages. WNTI is well-positioned to influence the evolution of regulations and maintain global standards for safety and security. The organisation is committed to providing the necessary guidance and solutions to help new nuclear nations, technology vendors, developers and operators understand transport requirements. WNTI recognises that the challenges ahead require it to adapt and evolve to remain contemporary, so it can drive beneficial change to meet the demands of the industry.

WNTI sees the global resurgence of the nuclear industry not as a threat but as an opportunity to contribute to the drive towards a lower-carbon world and achieve net-zero. By embracing these changes and maintaining high standards, WNTI can continue to meet the needs of global stakeholders for safe and secure transport, even as the industry continues to evolve.

Looking to the future, WNTI envisions a world where safety and security in global nuclear transport continue to be paramount. The organisation is committed to staying at the forefront of innovation and collaboration, leading the way in developing and implementing even more stringent best practices. WNTI's vision for the future is a world where the safe transport of nuclear materials paves the way for a brighter, more sustainable future.

"Many congratulations to WNTI on reaching this important milestone. Over 25 years, you have been a vital collaborative hub for industry helping to improve standards and understanding of nuclear transport. You have cemented your place as a trusted voice for the industry at the IAEA, the IMO and other institutions. Our organizations have worked effectively together notably on transport during COVID and on denials of shipments.

The next quarter century could well see a tripling of nuclear power capacity worldwide, including the development of technologies very different to what we have today. WNTI's role in helping to enable safe and efficient nuclear transport in this context of growth and innovation will become more important. World Nuclear Association will be at WNTI's side helping to meet the challenges and bring success."

- DR SAMA BILBAO Y LEON
DIRECTOR GENERAL
WORLD NUCLEAR ASSOCIATION (WNA)

"Happy Birthday to the WNTI!

25 years developing innovative transportation solutions for the nuclear industry and agreeing on common approaches.

Thank you."

- GILLES REBOUR
SENIOR SUPPLY CHAIN SPECIALIST
ORANO TN AMERICAS LLC

"WNTI´s age is simply the number of years the nuclear world has been enjoying this organisation. It has been hard work, but also a lot of fun.
We should celebrate this success story and then start to refocus."

- JOEL KRUEHLER
LOGISTICS COMPLIANCE MANAGER
URENCO LIMITED

"Happy 25th Anniversary! We really appreciate the WNTI staff for their hard work and dedication to date.

May this anniversary be the start of another great chapter."

- KOICHI NAKAMA
BOARD OF DIRECTORS OF WNTI
GENERAL MANAGER OF DESIGN AND DEVELOPMENT, NUCLEAR FUEL TRANSPORT CO, LTD

"Welcome to all WNTI Members. I should very much like to congratulate the World Nuclear Transport Institute for 25 years of valuable service to the nuclear industry and wish it a very happy 25th birthday.

I have many very fond memories of working with the WNTI and give my very best wishes for continued success in addressing the key nuclear transport challenges of the future."

- BILL WILKINSON
PREVIOUS WNTI BOARD OF DIRECTORS
SPECIALIST ADVISORY CONSULTANT TO THE WNTI SECRETARY GENERAL

"Congratulations to the WNTI team and members for their work done during those past 25 years!

Let's embrace the future by becoming a leading supporter of transportation of new technologies and radioisotopes and by being actively inclusive of young generation and women while continuing to contribute to safe and secure transportation of all radioactive and nuclear materials."

- CATHERINE SHELTON
WNTI CONSULTANT

"On behalf of WINS, I want to congratulate our WNTI sisters and brothers, irrespective of whether you are WNTI members, staff in London or serve on the Board. I have met a broad spectrum of you all and it has been great in every respect. You are dedicated, proud and fine people who contribute greatly to health, growth, security and safety in this world. That has to and will continue as you and we look ahead, and the world is seeking for clean energy, reliable research, medical uses and other applications of nuclear and radioactive materials. WINS salutes you and looks forward to the next 25 years together with you."

- LARS VAN DASSEN
EXECUTIVE DIRECTOR
WINS, WORLD INSTITUTE FOR NUCLEAR SECURITY

"A very happy 25th birthday to the WNTI – whoop whoop! My time with the WNTI family has been excellent, this diverse team has worldwide knowledge of the nuclear industry which is shared to the benefit of us all.

It feels really appropriate that Martin and his hard-working team are able to celebrate this milestone for the WNTI organisation, you can feel proud of what you are achieving.

Long may it continue!

Thanks and well done to everyone."

- ALAN MOSES
BUSINESS CHANGE AUTHORITY.
SPENT FUEL MANAGEMENT.
SELLAFIELD LTD.

---

*" **W**e wish you*
* **N**ice*
* **T**remendous*
* **I**ncredible*
Birthday for these 25 years, all the best for the next coming years"

- MONIQUE GINOUX
SENSITIVE CARGO DIVISION MANAGER
CMA CGM

"25 years successful contribution to our industry, congratulations WNTI. RSB is looking forward to the next 25 years to come"

- STEFAN HOEFT
RSB LOGISTIC PROJEKTSPEDITION GMBH
GESCHÄFTSFÜHRER / MANAGING DIRECTOR

"WNTI was born 25 years ago. Step by step, under the leadership of its Secretary-Generals, and thanks to the dedication of its staff, its specialist advisors (and also some consultants…) and the invaluable contribution if its Members, WNTI succeeded to be a well-recognized institute with many organizations including the International Atomic Energy Agency (IAEA), my favorite one. The IAEA is now my third family, my second one being WNTI… And my first family is still, of course, my wife, my children and their partners, and now my grandchildren.

May I make a parallel between WNTI and my personal life? 25 years ago, when I started collaborating with WNTI as a member of the industry, WNTI was young and my children as well (at least the youngest), and I was a young father. 25 years later, WNTI is a mature organization and my children as well, and I am a young grandfather. For the next 25 years more, let me wish to WNTI to be still mature but to keep a young spirit, to my children as well, and for me perhaps to be a young grand-grandfather.

Happy birthday WNTI! Let me wish to WNTI to be as successful during the next 25 years, as it was during the first 25 years. And keep me a seat for the party for the 50th birthday!"

- PIERRE MALESYS
WNTI CONSULTANT

"Congratulations from NFC Logistics (TENEX Group) on this special day – 25th anniversary!

We highly value the open cooperation with the WNTI, which allows members of this international Institute to jointly successfully solve practical problems on a long-term basis for the safe and secure handling of nuclear and radioactive materials during worldwide transportation.

We wish WNTI new successes, achievements and prosperity in ensuring the nuclear transport function, which is an important part of the global Nuclear Fuel Cycle!"

- NFC LOGISTICS TEAM:
ALEXANDER ZHELNIN
OLEG KOZIN
ROMAN FEDOSENKO
PAVEL SHADEEV
ANDREY DRONISHINETS

/11

"Congratulations on your 25th anniversary WNTI!
The more we get involved the more we benefit.

Hope you keep going with our members for next the 25 years."

- YOICHI OGAWA
BOARD OF DIRECTORS OF WNTI
SECRETARY GENERAL
OVERSEAS REPROCESSING COMMITTEE

"I've always enjoyed the lasting friendship, trust and camaraderie found within WNTI. These great relationships, built over years, have always made working on drafting documents or proposals to the regulations a truly collaborative process resulting in positive outcomes for all. Looking forward to the next 25 years!"

- MARC-ANDRE CHARETTE
DIRECTOR TRANSPORTATION, SECURITY AND REGULATORY RELATIONS
CAMECO CORPORATION

"Happy Birthday WNTI!!!

Incredible for me to see you where you are now... 25 years after our initial successful and such promising contact!

A Great love story...!

Indeed, I remember my WNTI timeline very well,

Summer '98 - your creation, the initial consideration for me to be your first London Director; however, we move to Autumn '98 where I became one of your very first Advisory Committee Member.

2003 approached and I moved positions to join the Board of Directors. Then finally 2010 came, I was appointed as your SG to take over from Mr Lorne Green and done so for a wonderful 7 years, hanging up my SG Hat in 2017.

But my WNTI journey didn't end there, I continued as "Special Advisor" to support your present SG mainly for the preparation of PATRAM 2022!

During these 25 years of common life together, which, with the support of your successive SG's, Board Directors, Advisory Committee Members, Specialist Advisors and your TEAM and Members, we have brought you up to your present highly fruitful development with these so highly appreciated services for Industry and involved UN Organisations!

I wish you a nice future, spreading your skills, with a strong Membership, and new Members not reluctant to pay for this fantastic tool you are to help them to make a successful, highly safe and secure business!

Great achievements and congratulations!!!"

- HENRY-JACQUES NEAU
PREVIOUS WNTI SECRETARY GENERAL

"Firstly, congratulations to the WNTI group of member companies on the 25th Anniversary of the WNTI founding in 1998 in London. Thanks, are clearly due to BNFL, ORANO and FEPC for their original foresight and commitment to the founding and development of WNTI activities.

The WNTI has made fantastic progress since 1998 and is now seen to as 'the' entity for Companies, regulators, and industry parties to engage with on safe and secure transport worldwide

During my own 35 years in our nuclear industry, I remember fondly the positive contributions of WNTI member representatives in resolving key issues and maintaining the tremendous safety record of our Industry. My own short time as SG in WNTI was both Inspiring and enjoyable and working with the member companies was always a pleasure.

I feel sure that the WNTI group will continue to contribute fully to the new challenges in nuclear materials transport and thus play its part in maintaining safety and security in the anticipated new phase for nuclear.

With my Best wishes for the coming years, and I hope you get some time to celebrate the 25th anniversary"

- JOHN MULKERN
PREVIOUS WNTI SECRETARY GENERAL

"It's a special day! It has been a great development and performance for 25 years. I wish the team and all its supporting members that the journey moves on with the same success.

I have been involved in WNTI for almost 12 years now. When I arrived, I was welcome openly by all WNTI stuff and members. Over time there has been lot of success built through people's support reacting to different challenges and I am simply proud about these strong relationships we established in WNTI.

I wish that the success factors of the first 25 years form the essential part and foundation for the next 25 years. I would like to see that everyone recognizes the time and effort it takes to establish such a strong organisation and is willing to support this success story."

- JOEL KRUEHLER
LOGISTICS COMPLIANCE MANAGER
URENCO LIMITED

"It is with immense pleasure that I extend my heartfelt congratulations to the World Nuclear Transport Institute (WNTI) on its 25th Anniversary.

The World Maritime University (WMU), established in 1983 by the International Maritime Organization (IMO) is the leading international institution and a centre of excellence for maritime and oceans education, professional training and research while building global capacity and promoting sustainable development in furtherance of the mission of the IMO. The University's 6,090 graduates from 170 countries and territories are working at the forefront making significant contributions to ensuring the implementation of the IMO Conventions both nationally and internationally.

WMU and WNTI have shared a remarkable collaboration over the past 21 years. WNTI has been a long-standing supporter of WMU and has contributed to the mission of the University through financial support for student fellowships as well as providing guest lecturers to further enrich WMU's academic programmes. In addition, WNTI has provided financial support to the WMU library.

To date, WNTI has awarded 11 fellowships since 2002 to students from Antigua and Barbuda, China, Ghana, Jamaica, Panama, Philippines, Peru, Saint Vincent and the Grenadines, Tonga and Trinidad and Tobago. Ten of them have graduated, and the eleventh is expected to graduate in November 2024. They have all returned to their home countries and have been making important contributions in the maritime and ocean sectors.

Looking ahead, it is my hope that we can continue to build on our cooperation with WNTI, as together we take forward the cooperation between our institutions in enhancing maritime safety and security, particularly in relation to the global transport of nuclear and radioactive materials. I look forward to the dedicated partnership with WNTI for the many years to come."

- PROFESSOR MAXIMO Q. MEJIA, JR.
PRESIDENT OF WMU

OUR HISTORY

1998
The Beginning

The World Nuclear Transport Institute (WNTI) story begins on 28 April 1998, founded with the vision of promoting safe, efficient, and secure nuclear transportation worldwide.

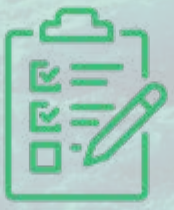
1999
Establishing Presence

WNTI gains provisional Consultative and Observer status with the International Maritime Organization (IMO), the International Atomic Energy Agency (IAEA), and the International Civil Aviation Organization (ICAO), marking the beginning of new relationships on a global scale.

WNTI establishes its first Working Groups, setting the stage for the launch of collaborative efforts and innovative teamwork.

2000 - 2001
Inaugural Meetings & Setting Standards

WNTI attends its first IAEA TRANSSC (Transport Safety Standards Committee), and continues to engage consistently with IAEA revision process, cementing its dedication to assist in setting industry standards and the evolution of international transport regulations.



2006
SAMM Debut – Member Engagement initiated

WNTI continues its trajectory of firsts with the launch of its Semi-Annual Members Meeting (SAMM), marking the primary gathering that becomes a cornerstone of collaborative discussions within the institute.

2008
A Decade of WNTI

WNTI commemorates a decade of impactful operations, celebrating its 10th anniversary and a decade of contributions to the advancement of safe and secure nuclear transport.

2003
Global Collaboration & Educational Initiatives

WNTI establishes collaborative partnerships and educational initiatives with introduction of the Industrial Site visit Programme and the Student Sponsorship Programme with World Maritime University promoting education in nuclear transport safety globally - earning recognition for its commitment.

2010 - 2016
Global Impact - Beyond the Borders

2010: WNTI reaches 50 members!!!

2010: Recognition and Honor: Co-hosted the 16th International Symposium on the Packaging and Transportation of Radioactive Materials. (PATRAM) in London and receives the prestigious AOKI Award.

2012: WNTI become observers at IAEA Nuclear Security Guidance Committee (NSGC)

2014: Shaping Port Infrastructure: WNTI played a key role in facilitating the acceptance of shipments of Class 7 radioactive materials on the opening of Portos do Norte, Mozambique.
2015: Emergency Preparedness Advocacy:

WNTI actively participated in the 1st IAEA Emergency Preparedness and Response Standards Committee (EPReSC) in Vienna.

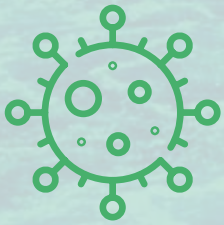
2016: Expanding Horizons: WNTI hosts its first Transport seminar in the Middle East, held in Amman, Jordan, in collaboration with INMM.

2016: Global Leadership Unveiled: WNTI reaffirms its leadership by co-hosting PATRAM 2016 in Kobe, Japan, underscoring its continued influence and prominence in international conferences.

2018
2 Decades of Excellence

WNTI marks another significant milestone by celebrating its 20th Anniversary. This event not only commemorates the institute's rich history but also highlights its enduring commitment to the global cause of safe and secure nuclear transportation.

2020
Responding to Challenges



WNTI plays a pivotal role in addressing challenges posed by the global pandemic, ensuring the continuity of nuclear transport while prioritising the health and safety of personnel.

.

2022
Sustainable Practices

WNTI takes significant strides towards incorporating sustainable practices in nuclear transportation, aligning with global efforts to reduce the environmental impact of the industry.

.

2023
25th Anniversary Celebration

WNTI marks its 25th birthday with a celebration, re-flecting on its contributions to nuclear transport safety and highlighting future goals.

The event includes an international summit, showcas-ing advancements in technology, safety protocols, and sustainable practices within the nuclear transportation sector.

BEYOND 2023
Future Endeavours

WNTI looks forward to continuing its mission, collaborating with stakeholders, and adapting to evolving global challenges to ensure the safe, secure, efficient and sustainable transportation of nuclear materials for the next generation.

Ultimately driving excellence and keeping nuclear moving!

CELEBRATING

25

YEARS

ABOUT WNTI

/16

WE DRIVE THE HIGHEST STANDARDS OF SAFETY AND SECURITY IN THE GLOBAL TRANSPORT OF NUCLEAR AND RADIOACTIVE MATERIALS.

At the forefront of the global nuclear transport industry stands the World Nuclear Transport Institute - a dedicated membership and non-governmental organisation committed to advocating, supporting and driving progress in this critical field. Drawing from a wealth of over 25 years of experience, the WNTI is deeply committed to fostering diversity and inclusivity, recognising that collaboration is essential to making a meaningful impact.

With a network of 40+ influential companies, the WNTI provides a dedicated platform and essential resources to drive change and shape the future of nuclear transport. As an institute, we are deeply passionate about tackling the technical challenges that define the industry. We actively engage in lobbying efforts to influence policymakers and ensure the industry's voice is heard. We also provide a platform for our members to express their concerns and ideas, promoting vibrant debate and discussion that ultimately drives excellence.

Being a WNTI member is a mark of quality that identifies companies as part of an experienced group of professionals actively contributing to the nuclear transport industry while driving the highest standards. With a Head Office in London and regional representatives in Washington, D.C., China, Australia and Tokyo, we strive to ensure safe and secure nuclear transport around the globe.

"I have been fortunate to serve as WNTI's representative in North America since January 2002. Over these many years, it has been my pleasure to work with WNTI Secretary Generals, headquarters staff, specialist advisors and member company representatives on a wide-ranging list of issues. WNTI members, through WNTI working groups, consortia and with others in industry, have worked together to resolve issues associated with packaging, security, radiation dose assessment and radiation protection, denial of shipments, and review and revision of transport safety standards, etc. WNTI members have traveled around the world to share their expertise and best practices, for example, holding workshops on uranium ore concentrates in Kazakhstan and Africa, transport safety workshops in China, and a recent advanced reactor fuel transport workshop in America."

- EILEEN M. SUPKO
WNTI NORTH AMERICAN REPRESENTATIVE

OUR MISSION

1. Be the authoritative voice on behalf of industry.
2. Drive stakeholder collaboration.
3. Innovate, learn and share.
4. Influence Policy, Regulation and Practice in Industry.

MEMBERSHIP

JOIN & DISCOVER WNTI: YOUR GLOBAL PARTNER IN NUCLEAR TRANSPORT

With WNTI, you're not just a member; you're a catalyst for future transformation of nuclear transport.

WNTI membership paves the way for you to exchange knowledge and experiences with the industry's best. The membership comprehensively covers all aspects of nuclear transport regulation and operation, fostering an environment for collaboration amongst our members.

Our membership is inclusive and welcomes all companies engaged in, or those at the forefront who hold a significant importance in, the transportation of radioactive materials for peaceful purposes.

These companies must actively champion the cause and be committed to promoting the highest standards of safe and secure transport.

At WNTI, we offer not one but two unique primary membership categories, each tailored to cater your specific involvement within the industry.

We look forward to welcoming you to our community. Together, we can drive change, foster innovation and make a real difference in the world of nuclear transport.

/18

GET IN TOUCH

For more information on how to become a WNTI member and embark on a journey to influence the future of nuclear transport, please contact:

Amy Northage
Portfolio Delivery Manager
amyn@wnti.co.uk

MEMBERSHIP CATEGORIES

ASSOCIATE

EMPOWERMENT IN ACTION

As an Associate member, your company steps into the heart of the action.

You become a driving force in the development of best practices and gain the power to influence meaningful change through our industry working groups and delivery streams.

The perks don't stop there, Associates enjoy unrestricted access to our comprehensive suite of online tools and documentation, along with access to any information generated by WNTI.

Furthermore, they receive complimentary attendance at all our events, meetings and seminars. When applicable, they also possess the opportunity to contribute to shaping the future safety, reliability and regulatory landscape for the transportation of nuclear goods.

SUPPORT

A VITAL ROLE IN THE BIGGER PICTURE

For companies playing pivotal roles within the broader supply chain, our Support membership category is the perfect fit.

While you may not be directly involved in transportation, you remain an essential cog in the wheel. With Support membership, you gain access to our full suite of online tools and documentation, offering valuable resources to streamline your operations. Attendance at our events, meetings and seminars is available as an observer is complimentary but on a limited basis.

MEMBERSHIP BENEFITS

INFORMATION EXCHANGE

Leading the way in Good Practices!

As a WNTI member, you'll be at the forefront of the latest industry developments. Enjoy a wealth of information through:

Monthly e-newsletter:
Stay up to date with the industry's pulse, ensuring you're in the know on the latest developments.

Access to Technical Specialists and Regional Representatives:
Get valuable insights and advice from experts in the field. A direct line whenever you need guidance.

WNTI Publications:
Gain free access to a treasure trove of good practice guides, fact sheets and industry standards.

Observer and Consultative Status Reports:
Stay in the know with reports from influential intergovernmental organizations such as IAEA, IMO and ICAO.

WNTI Reports:
Explore our extensive library of reports, all at your fingertips.

NETWORKING FORUM

Connect, Collaborate and Lead

WNTI membership opens doors to an unparalleled networking forum within the nuclear transport industry. Enjoy:

Complimentary Attendance:
Participate in all WNTI Meetings, including both days of the SAMM and Industry Working Groups.

Regular Meetings:
Collaborate throughout the year to address industry challenges, discuss key issues and foster best practices.

INDUSTRY WORKING GROUPS DELIVERY STREAMS

A Channel for Impactful Change

Through our Industry Working Groups Delivery Streams, you'll have the opportunity to:

Shape Industry Positions:
Work with like-minded companies to develop well-researched consolidated positions on practical issues of concern, which are then represented at key international meetings influencing transport safety regulations.

MEETING ROOM SERVICES

Your Home Away from Home

WNTI supports its members with access to meeting rooms in Central London:
Our office is always open for you, encouraging personal visits.

EXCLUSIVE MEMBERS PORTAL

A Gateway to the Latest Insights

Enjoy privileged access to the latest reports, presentations and regulatory recommendations through our exclusive members-only website portal.

OBSERVER AND CONSULTATIVE STATUS

Influence on a Global Scale

WNTI members occupy a unique position, representing the industry where international regulations are negotiated at major forums like the United Nations International Atomic Energy Agency (IAEA), the International Civil Aviation Organization (ICAO), the International Maritime Organization (IMO) and the International Organization for Standardization (ISO).

A BETTER INDUSTRY

A World of Change

By joining WNTI, you actively contribute to the promotion of safe, secure, efficient, reliable and sustainable transportation of nuclear and radioactive materials. Make a difference by:

Shaping Industry Views: Stand with us as we present the industry's perspective on radioactive materials transport matters from an international standpoint.

HAVE YOUR SAY

Influence decisions and outcomes that drive industry progress, benefitting your company and the global nuclear industry.

SAMM

SEMI-ANNUAL MEMBERS MEETING

/22

Discover the heart of WNTI member engagement and interaction – Our Semi-Annual Members Meeting (SAMM), an eagerly anticipated event in our institute's calendar.

Occurring semi-annually in June and December, the meeting serves as a pivotal moment, uniting our members from all corners of the globe to discuss achievements, set new goals and strengthen our sense of community.

At the core of SAMM lies a commitment to foster collaboration, encourage knowledge-sharing and reinforce our values to uphold the highest standards within the nuclear transport sector.

This commitment is achieved through our industry working group delivery streams, vibrant open forum discussions and interactions with seasoned professionals and technical experts.

While the global pandemic disrupted our traditional gatherings, we swiftly adapted, evolving SAMM over the past few years with a refreshed format and formula.

Spanning across three days, SAMM proudly host four tailor-made Delivery Streams that serve as catalysts for innovation, offering our members the platform to:

- **Exchange visionary ideas.**
- **Engage in robust debates on best practices.**
- **Tackle intricate technical challenges.**
- **Combine their wealth of knowledge and experience.**
- **Forge unified positions on contemporary issues.**
- **Collaborate to shape the future sustainability of the nuclear transport industry.**

For WNTI, SAMM is not just a meeting; it's a celebration of our collective efforts and a testament to our unwavering dedication to continuous improvement.

A warm welcome awaits every attendee as we come together to drive progress and collectively shape the future of nuclear transport for the better. Join us in this celebration of innovation and collaboration at SAMM, ultimately driving excellence and keeping nuclear moving!!!

GLOBAL SAMM LOCATIONS

2006 - 2023

SAVE THE DATE

wnti

SUMMER SAMM

GET READY FOR AN UNFORGETTABLE EXPERIENCE.

4 - 6 JUNE 2024

We are excited to announce the upcoming WNTI Summer SAMM 2024!

Mark your calendars for June 4-6, 2024, as we prepare to embark on a dynamic journey filled with networking, collaboration, discussions and goal setting. While the location is still to be confirmed, we can assure you that it will be an event you won't want to miss.

Here's a glimpse of what you can look forward to:

Networking: Build and strengthen your professional network by connecting with industry experts, thought leaders and fellow participants.

Collaboration: Discover new ways to collaborate with peers and fellow members that share your passion and vision.

Discussions: Engage in thought-provoking discussions on the latest practices, challenges and opportunities in your field.

Goal Setting: Gain insights and inspiration by hearing WNTI's ambitions and goals for the future.

Stay tuned for exciting updates including our event location reveal, speakers and the full agenda. We are committed to creating a memorable and enriching experience for all attendees.

2024

“WNTI Summer SAMM 2024 promises to be an engaging event, and we can’t wait to have you join us. Don’t forget to Save the date - We look forward to welcoming you in June 2024!”

- AMY NORTHAGE PORTFOLIO DELIVERY MANAGER

OUR MEMBERS

AUSTRALIA

BHP

BELGIUM

ELINI – European Liability for the Nuclear Industry

sa TRANSRAD nv

BULGARIA

GSG Corporate

CANADA

Cameco Corporation

Commonwealth Independent States Navigation Inc (CISNAV)

Nuclear Waste Management Organization (NWMO)

TAM International Inc

"As we look ahead to the next 25 years, we at TAM hope to see WNTI and its members continue to collaborate together to promote the safe transport of radioactive materials. Here's to more memorable collaborations, driving regulatory changes and a future filled with even greater positive influence."

- Steven Hansen - Chief Compliance Officer,

TAM International LP

CHINA

Nantong CIMC Tank Equipment Co, Ltd

FRANCE

ORANO

Orano NPS (Packages & Services)

Assuratome

Bureau Veritas

CEA - French Alternative Energies and Atomic Energy Commission

CMA CGM

Descote s.a.s

Électricité de France (EDF)

GERMANY

BBC Chartering GmbH & Co. KG

BGZ Gesellschaft für Zwischenlagerung mbH

GNS Gesellschaft für Nuklear-Service mbH

Orano NCS GmbH (DAHER-Nuclear cargo & Service GmbH)

RSB LOGISTIC Projektspedition GmbH

JAPAN

The Federation of Electric Power Companies of Japan (FEPC)

Hitachi Zosen Corporation/ NAC International

Japan Nuclear Fuel Ltd (JNFL)

Marubeni Corporation

Nuclear Fuel Industries, Ltd (NFI)

Nuclear Fuel Transport Co. Ltd (NFT)

Sojitz Corporation

Sumitomo Corporation

KAZAKHSTAN

NAC KAZATOMPROM JSC

RUSSIA

J.S.C Atomic Industry Transport and Logistics, JSC Atomspectrans

J.S.C Saint Petersburg "IZOTOP"

J.S.C Techsnabexport (TENEX)

"On behalf of Atomspectrans, JSC, we congratulate WNTI team on this significant date and memorial milestone – 25th Anniversary of WNTI.

The team of professionals united under the auspices of WNTI during the entire period of its existence has contributed to the unification of the expert opinions and best practices of the specialists from different countries and spheres of activity in order to promote the World Nuclear Community."

- Vladimir V. Nashchokin Director, Atomspectrans, JSC

SWITZERLAND

Swiss Nuclear Fuel Commission (Axpo Power AG)

SOUTH AFRICA

ESKOM Holdings SOC Ltd.

UK

Nuclear Decommissioning Authority (NDA) -

Nuclear Transport Solutions (NTS) / Nuclear Waste Services (NWS) / Magnox Ltd / Sellafield Ltd

CORE POWER (UK) Ltd

Lloyd's Register

NewCleo Ltd

Rolls Royce Submarines Ltd

URENCO Ltd

USA

ALARA Logistics

American Bureau of Shipping (ABS)

ConverDyn/General Atomics/Honeywell

Westinghouse Electric Company

"Westinghouse is proud to have been part of the World Nuclear Transport Institute family from its very beginning. I am personally proud to have been attending and supporting the World Nuclear Transport Institute for the last 18 years, my first meeting being in London in 2005, when Lorne Green was the Secretary General.

It's been great to see the World Nuclear Transport Institute grow and develop over the years and provide an important environment for its member to discuss topical issues, share ideas and solve problems. Nuclear energy will play an important role over the coming decades, sporting the drive to a low carbon future. And I am sure the World Nuclear Transport Institute will be there as always playing a vital supporting role.

Congratulations on your first 25 years and looking froward to the next 25 years!"

- Tony Grange
Licensing and Compliance Manager
Westinghouse

/27

MEET THE TEAM

Introducing the WNTI Team. Our team consists of proficient nuclear transport specialists, expert consultants, knowledgeable global industry experts and our dedicated core business team collectively working towards our mission of driving a safe and secure nuclear transport future.

With passion, talent and decades of combined expertise, they steer the organisation in accomplishing our objectives in the worldwide nuclear industry. Get to know the people behind WNTI who continually strive to shape the future of nuclear transport.

HEAD OFFICE

Martin Porter
Secretary General

Amy Northage
Portfolio Delivery Manager

Chris Chen
Finance & Commercial Manager

Elisa Penda
Transport Specialist

Emily Midgley
Marketing & Communications Manager

Capt. Simon Chaplin
Maritime & Security Specialist

Yukio Okabe
Engineering & EPR Specialist

REGIONAL REPRESENTATIVES

Eileen Supko
North American
Representative

Yukio Sakakibara
Tokyo Representative

Frank Boulton
Australasian
Representative

Steven Shi
China Representative

WNTI CONSULTANTS

Alastair Brown
Consultant

Catherine Shelton
Consultant

Henry- Jacque Neau
PATRAM 22
Consultant

Pierre Malesys
Consultant

"WNTI gave me unparalleled opportunities for working in a good atmosphere with Members from so many different countries, from so many different companies, with so many different cultures but with an unquestionable common goal."

- PIERRE MALESYS
WNTI CONSULTANT

GOVERNANCE

BOARD OF DIRECTORS

Chris Watson
WNTI Chair

Jessica Boutteau
Orano NPS

Peter Buchan
Nuclear Transport Solutions (NTS)

Yoichi Ogawa
Overseas Reprocessing Committee

Olaf Oldiges
Orano NCS

Koichi Nakama
Nuclear Fuel Transport Co. Ltd

Michael White
Sellafield

Gareth Davies
Honorary Secretary and Specialist Advisor

"As a company specializing in nuclear fuel cycle transport in Japan, NFT has participated in WNTI as the associate member since its establishment in 1998, and has been involved in operation of WNTI since 2004 as a board member on behalf of the Federation of Electric Power Companies of Japan (FEPC), the founding member.

In recent years, as a member of WNTI, we have been privileged to attend the IAEA TRANSSC and related expert meetings and have benefited greatly from the opportunity to voice our opinions in discussions on the rational and efficient revision of international regulations.

Nuclear power is now attracting a great deal of attention worldwide from the perspectives of an effort on Net-zero and improving energy security, and new entrants, reactor expansions, and the development of next-generation reactors such as SMRs are being promoted. At the same time, decommissioning of existing nuclear reactors is underway, and radioactive material transport is expected to become increasingly important in the future.

We expect WNTI to respond flexibly to such changing times and provide leadership on behalf of the voice of the industry to ensure the smooth transport of radioactive materials around the world. In cooperation with ORC, which represents the FEPC, a founding member, we will also continue to contribute to the activities of WNTI as an associate member, board member, and through our specialist advisors."

- KOICHI NAKAMA
WNTI BOARD OF DIRECTORS

"A quarter century, not out! Congratulations to the World Nuclear Transport Institute and here's to the next 25 years!

Having been with WNTI for a large part of its 25-year history as an Advisory Committee Member, Board Director and Consultant, I have fond memories of watching it grow from not much more than the three founder members plus a handful of associate members to the organisation it is today with over 50 members and a truly global reach.

WNTI can be proud of the part it has played over that time, supporting its members and influencing regulation and public opinion for the better. It has also provided a service to the wider nuclear transport community, not least through the enormously successful PATRAM 22 conference earlier this year.

Looking forward, it is difficult to know where the industry will be in another 25 years. The nuclear renaissance supporting net zero is an exiting time with lots of opportunities, but also lots of challenges, not least in the transport arena.

We are rightly proud of our legacy of safe transport based on a stable regulatory framework, however that will not be enough to support new nuclear and the challenges of transporting advanced fuels and even fueled reactors. This, together with the growing demands of decommissioning mean that there will be an even more important role for WNTI, representing industry and promoting measured change to the regulatory framework to maintain the record of safety and security, but also enable the nuclear renaissance."

- ALASTAIR BROWN
WNTI CONSULTANT

WNTI Team at PATRAM 22, June 2023

WNTI ONLINE

PLAN, ENGAGE & CONNECT: INTRODUCING THE WNTI EVENT APP

New for December 2023. Discover the WNTI Event App - your all-in-one source for the latest information on our Semi-Annual Members Meeting (SAMM).

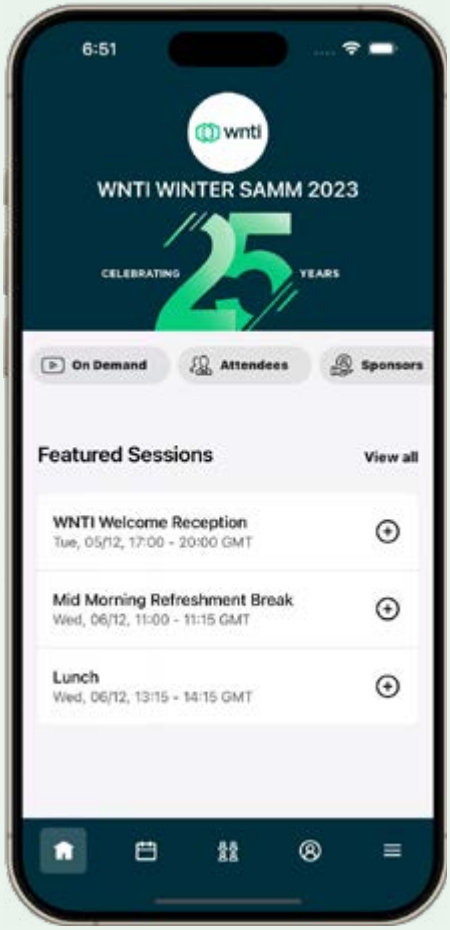
Packed with schedules, agendas, location maps, speaker profiles, interactive content and more. Now, staying informed and networking with WNTI members has never been easier. Download now and unlock a seamless meeting experience right at your fingertips. Stay in touch with the latest updates, collaborate with other members and ensure you're up-to-date on everything happening at SAMM.

To download your WNTI Events App for IOS or Android, search 'WNTI Events' in the Apple App Store or Google Play.

Please note: you must be registered for the event to access the app.

Download on the App Store

GET IT ON Google Play



EXCLUSIVE WNTI MEMBERS PORTAL

The WNTI Members Portal is an exclusive online platform for the members of the World Nuclear Transport Institute (WNTI).

It is a dedicated platform that provides privileged access to crucial industry updates, exclusive information, insider reports and the latest news related to the nuclear transport industry. The WNTI Members Portal ensures a high level of data security, granting access to sensitive and confidential information solely to authenticated members. The portal underscores WNTI's commitment to providing a platform for sharing expertise and fostering collaborations within the global nuclear transport community, empowering its members to stay at the forefront of industry developments and trends.

WNTI Members can sign up to the Members Portal by scanning the QR code below or visting: www.wnti.co.uk/register

Please note: you must register with your company email address.

STAY CONNECTED, STAY INFORMED

The WNTI Members Information Email is your number one source for all important information, latest updates, exciting announcements and more from WNTI.

It's designed to provide members with an insightful perspective on what's going on in the nuclear transport industry and in WNTI. What makes it better? It's delivered right to your inbox every month! It offers you the convenience of being updated without needing to go searching for the latest information yourself. Gain first-hand knowledge on member-focused initiatives, vital decision-making information, upcoming events, activities and so much more! Our email newsletter is a sure way to help you leverage the benefits of your WNTI membership and actively participate in the community. Don't miss out on the vital information. Subscribe to the WNTI Members Information Email today! Get engaged, stay informed and be a part of WNTI's journey forward!

WNTI Members can register for the Information Email by contacting: emilym@wnti.co.uk

REACH FURTHER WITH WNTI

The World Nuclear Transport Institute (WNTI) now provides a service for member organisations by sharing their news stories across its channels - LinkedIn, website and the monthly Information Email.

This is a significant advantage to WNTI members, as it grants them the unique opportunity to communicate their latest developments, innovations, or advancements with a dedicated global audience. The WNTI's network is continuously growing and spans across the global nuclear transport industry, thereby maximising the reach of news shared. From insightful business updates to groundbreaking technological improvements in nuclear transportation, all news is shared! Ultimately, this fosters collaborative development, encourages a higher level of knowledge exchange and further unifies the international nuclear transport community, creating a well-informed, constantly updated and connected professional industry network.

If you would like to share your organisation's news via WNTI please contact: emilym@wnti.co.uk

/33

wnti.co.uk

World Nuclear Transport Institute

ABOUT NUCLEAR TRANSPORT

EACH DAY THOUSANDS OF SHIPMENTS OF RADIOACTIVE MATERIALS ARE TRANSPORTED AROUND THE WORLD.

In our world increasingly reliant on nuclear energy, the nuclear transport industry plays a crucial role in powering sustainable energy. It is an industry that ensures safe and secure transport of nuclear and radioactive materials worldwide, with an uncompromising emphasis on impeccable safety records.

Beyond its vital role in the energy industry, nuclear transport is also crucial to healthcare and agriculture sectors, ensuring an adequate supply of radioactive materials for research. By navigating geographical complexities and reducing risks, the industry helps power the sectors that contribute to modern civilisation's development.

Strict regulations and international standards govern the nuclear transport industry. These regulations are in place to guarantee safe and secure transportation, prevent environmental contamination, and protect workers and the general public. The International Atomic Energy Agency (IAEA) has established a set of international regulations that WNTI works with industry partners and regulatory authorities worldwide to ensure effective implementation.

Emergency response measures and physical protection schemes are systematically in place to address any eventuality. The transport of radioactive materials by land, sea, or air is accompanied by unique protective measures and practices to prevent incidents.

As the worldwide nuclear transport industry continues to stride towards a sustainable future, it remains committed to maintaining the strictest safety measures and standards.

ABOUT

15

MILLION TRANSPORTS OF RADIOACTIVE MATERIALS TAKE PLACE, GLOBALLY, EACH YEAR.*

OVER

60

YEARS OF SAFE AND SECURE NUCLEAR MATERIAL TRANSPORT.

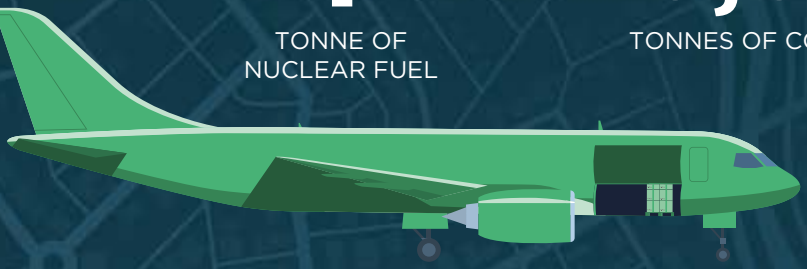
During this period there has never been a transport accident that has caused significant radiological damage to people or the environment

RADIOACTIVE AND NUCLEAR MATERIALS ARE SAFELY AND SECURELY TRANSPORTED BY

1 = **120,000**

TONNE OF NUCLEAR FUEL

TONNES OF COAL



NUCLEAR POWER PROVIDES

14%

OF GLOBAL ELECTRICITY

AROUND 95% OF TRANSPORTS ARE NOT FUEL CYCLE RELATED
Radioactive materials are used extensively for:

- MEDICINE
- AGRICULTURE
- RESEARCH
- MINERAL EXPLORATIONS
- MANUFACTURE
- NON-DESTRUCTIVE TESTING

SUSTAINABILITY

Unlike fossil fuels, nuclear power leads to relatively small quantities of carbon dioxide being release, one of the number one causes of global warming.

URANIUM
offers a long-term source of energy as it can be **RECYCLED**

DECARBONISING SHIPPING WITH NUCLEAR MARINE PROPULSION
Marine transport accounts for over 3% of all greenhouse gas emissions, primarily carbon dioxide, that's more than all but 5 countries.

If the **20%** Largest merchant ships were powered by nuclear, **80%** Of this pollution would be removed

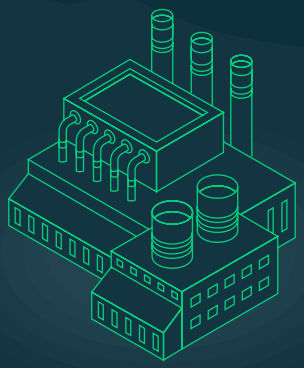
Even after operation in a reactor, over **90%** of the potential energy remains in the spent fuel, and this can be recycled to make more fuel for the reactor.**

*Source: World Nuclear Association
** Source: Office of Nuclear Energy

THE NUCLEAR FUEL CYCLE

1 URANIUM MINING

Ore deposits containing economically feasible amounts of uranium are extracted using in-situ solution mining, underground mining, open pit mining, or heap leaching.

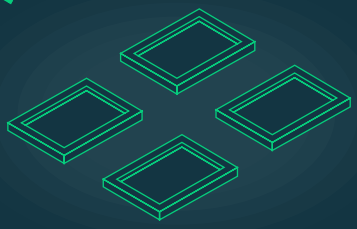


2 REFINING

Uranium ore is crushed, pulverized and ground into a fine powder, then chemicals are added to separate the uranium from other materials and concentrate it in yellowcake (U_3O_8).

3 CONVERSION

Yellowcake is converted to uranium hexafluoride (UF_6) gas at a conversion facility. This is called natural UF_6 since the original concentrations of uranium isotopes are unchanged.



4 ENRICHMENT

Individual uranium isotopes are separated to produce enriched UF_6, which typically has 3% to 5% concentration of U-235 to operate more efficiently in nuclear reactors.

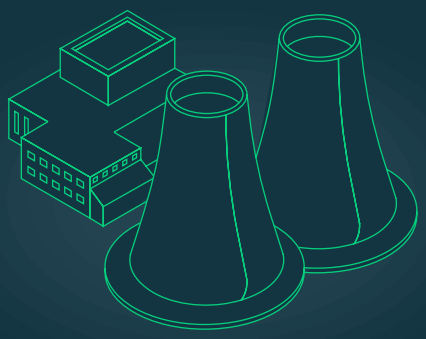
The Nuclear Fuel Cycle, represents the process by which nuclear energy is harnessed for power production. This intricate cycle encompasses steps from mining and milling of uranium to the disposal of nuclear waste. Our commitment to safe and secure environmentally responsible transport of nuclear materials is integral to this global cycle. Ensuring efficient, well-regulated transport pathways enhances the nuclear fuel cycle, contributing to sustainable energy generation worldwide. Our work is indispensable to energy production today, powering millions of homes and businesses.

5 URANIUM FUEL

Nuclear fuel fabrication facilities chemically convert the UF_6 into solid uranium dioxide (UO_2) pellets. Those pellets are stacked and sealed into long metal tubes (fuel rods) which are bundled together into fuel assemblies.

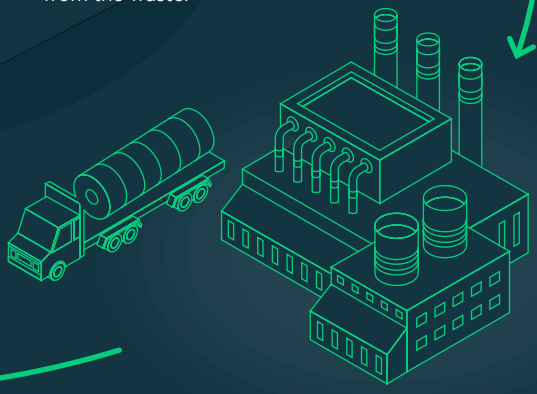
6 POWER GENERATION

Fuel assemblies are placed into nuclear reactors, where each assembly typically operates for three 12-to-24-month cycles, producing electricity by generating heat from the fission reaction.



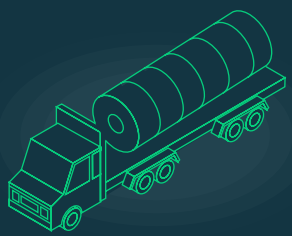
7 REPROCESSING

Used fuel still contains about 96% of its original uranium, some plutonium produced in the reactor and some waste. Reprocessing chemically separates the uranium and plutonium from the waste.



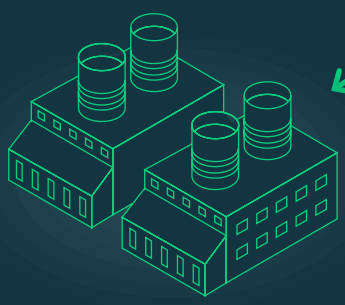
8 RECYCLING

The uranium and plutonium recovered from reprocessing are made into mixed oxide (MOX) fuel assemblies, which are sent to nuclear reactors that use MOX fuel.



9 TREATMENT STORAGE & DISPOSAL OF WASTE

The waste left over from reprocessing, or the used fuel of reprocessing is not used but stored until it has cooled enough to be placed into dry storage containers and eventually disposed of in a geologic repository.



The World Nuclear Transport Institute's Working Groups are an integral part of its operations, providing essential avenues for expert engagement and collaboration.

These committees focus on various aspects of nuclear transportation, which is a crucial area of the nuclear industry. Each group is meticulously composed of technical experts from the WNTI Membership, with input from WNTI Specialists and Consultants, thereby fostering a broad knowledge base and offering innovative solutions to the most pressing issues in the industry.

Key decisions regarding the organisation and prioritisation of work streams are made during the WNTI Portfolio Board Meetings, held quarterly. These critical discussions inform the direction of the various programmes within the Institute and establish a structured approach to meet their respective objectives.

In 2023, the working groups were systematically arranged into four principal programmes as part of the Portfolio Board for efficiency and clear categorisation. These programmes encompass the complete life cycle of nuclear fuel and operations and include: Front-End, Back-End, Generation, and Enabling Programmes. The Front-End Programme involves the transport of Uranium Ore Concentrates (UOC), HEX, and Fuel Bundles. The Back-End Programme manages activities relating to the safe and responsible handling of nuclear waste and spent fuel.

The Generation Programme includes the Maritime Applications and Nuclear Propulsion Working Group and, new for 2023: The New Nuclear Working Group that focuses on small modular and advanced nuclear technologies. Finally, the Enabling Programme includes the Policy and Regulation Delivery Stream and the Emergency Preparedness and Response Working Group. The work carried out within the Working Groups is presented to the wider WNTI membership during the Semi-Annual Members Meetings held in June and December each year.

The Working Groups at the World Nuclear Transport Institute encapsulate a comprehensive approach towards tackling the complexities associated with nuclear transport. The dedication of these specialist working groups ensures the safe and secure transport of nuclear materials globally. Their pivotal role fortifies the continued evolution and progression of the nuclear transport industry.

/38

Transport Security Working Group

Although the Transport Security Working Group has not held any meetings since July 2022, we continue to ensure that security topics for nuclear transport are covered. WNTI has observer status at the IAEA Nuclear Security Guidance Committee Meetings where the revision of the IAEA Nuclear Security Series (NSS) publications is conducted.
In 2023, WNTI was able to enlist the help of Aileen Harris and James Crabtree, both from Nuclear Transport Solutions (NTS), to help support our interface with the Nuclear Security Guidance Committee. WNTI greatly appreciates the commitment that Aileen and James have given us.

Going forward, we will continue to circulate relevant information concerning the revision cycle of new and existing NSS publications and seek comments from our member organisations.

The Transport Security Working Group will remain in adjournment until there is an identified need to reconvene.

DELIVERY STREAMS

As the curtains close on 2023, the WNTI community said goodbye to two of its esteemed members. Bruno Desnoyers, who served as Chair of the SSR-6 Working Group, retired from his role earlier in the year. Ceinion Thomas, on the other hand, left his position as Licensing Capability Specialist at Nuclear Transport Solutions and Chair of the Back-End Transport Working Group to explore new horizons in the industry. Both individuals played an instrumental role in their respective working groups, and we are immensely grateful for their commitment and hard work. Though WNTI feels their absence, their impact and expertise will reverberate for years to come, and we wish them nothing but success in their future endeavours.

"In this, WNTI's 25th year, we said goodbye and good luck to one of our most valued contributors, Bruno Desnoyers, as he retired from Orano and WNTI. Few will need any reminding of the tremendous amount of work that Bruno undertook in his WNTI tenure, most latterly in his role of SSR-6 Working Group Chair. Bruno remains highly respected and fondly remembered for his considerable endeavours, all of which were conducted with his distinctive warmth, calmness and assured professionalism. I travelled with Bruno on some WNTI missions and never missed the opportunity to acquire his wise counsel on challenging issues, receiving advice that was always considered, balanced and scientifically underpinned. I feel privileged to say that Bruno was my friend, my colleague and my mentor.

Along with all at WNTI, I wish Bruno a long, prosperous and healthy retirement!!!"

- MARTIN PORTER
WNTI SECRETARY GENERAL

"I was appointed as a secretariat of BET WG just after Ceinion took over the Chair in 2021, then we had been engaged on broad portfolio on back end transport, which was really exciting time for me in terms of being involved in international interests. One of the most valuable projects led by him during his tenure is Type-IW package (If you are interested in this project, please also have a look at "WNTI Fact Sheet – Alternative Solution for Higher Dose Wastes (Type IW Package)"). Lastly, I really appreciate his dedication to the portfolio and I wish he success in his new career."

- YUKIO OKABE
WNTI EPR AND ENGINEERING SPECIALIST

FRONT-END PROGRAMME

FRONT-END TRANSPORT (UOC, HEX AND FUEL BUNDLES) WORKING GROUP

Working Group Chair:
Joel Kruehler
Logistics Compliance Manager, Urenco Limited

Working Group Co-chair:
Marc-Andre Charette
Director Transportation, Security and Regulatory Relations, Cameco Corporation

Working Group Secretary:
Elisa Penda
Transport Specialist
e.penda@wnti.co.uk

During WNTI WINTER SAMM 2023, there will be a discussion on combining the Uranium Ore Concentrates (UOC) Working Group and the HEXT Working Group to create the Front-End Transport (UOC, HEX and Fuel Bundles Working Group) Working Group.

The Front-End Transport Working Group provides support to the WNTI membership by addressing operational challenges and helping the industry apply a practical approach in interpreting and implementing all applicable regulations and requirements. The group is committed to maintaining compliance with safety and security at all times.

In order to efficiently manage the transport of Uranium Ore Concentrates, uranium hexafluoride and fuel bundles, it is essential to develop and maintain publications. These can take various forms, including Good Practice Guides, WNTI Standards and Fact Sheets. These publications will serve as a reference point for ensuring safety and efficiency in this critical sector. Furthermore, a forum is also in place for industry members to share their experiences, issues and incidents. The lessons learnt from this interactive exchange can then be relayed to transport industry stakeholders for a broader understanding and improvement of practices. Another key task is keeping the Working Group membership abreast of any pertinent information, either being proposed or to be issued, by regulators or intergovernmental agencies.

Key 2023 work:

- The publication of the WNTI Fact Sheet - Media and Communications - Uranium Ore Concentrate.
- The revision of WNTI Good Practice Guide for Valve and Plug Installation of UF6 Cylinders.

Key 2024 work:

- Participation in RAMTrans 2024 from 15 - 17 May 2024 in London, United Kingdom.

Publications

- 2 **STANDARDS**
- 4 **GOOD PRACTICE GUIDES**
- 4 **FACT SHEETS**
- 1 **INFORMATION PAPERS**

Achievements of the last 25 years

1. Publication and revision of the Standard for Packaging and Transport of Uranium Concentrates and the WNTI Standard – UF6 Cylinder Identification along with other fact sheets and good practice documents.
2. Under the umbrella of WNTI the lifting lug incident in 2013 was processed and solved.
3. Through the HEXT WG (formed in 1999) an industry consortium was formed which successfully developed the VPA and the thermal protectors for 48-inch cylinders which are still in use today.
4. Inserted, with support of SSR-6 Working Group, the inclusion of a new UN number for small quantities of UF6 (UN3507).
5. Bringing together the industry to provide one consistent message and address concern as well as rally members to influence standard bodies, international organizations and regulators.

BACK-END PROGRAMME

BACK-END TRANSPORT WORKING GROUP

Working Group Chair:
Ceinion Thomas
Licensing Capability Specialist
Nuclear Transport Solutions (NTS)

Working Group Secretary:
Yukio Okabe
Engineering and EPR Specialist
yukioo@wnti.co.uk

Established in 2009 by WNTI, the Back-End Transport Working Group (BET WG) was initially named the 'Waste Transport Management Working Group'.

The Working Group serves as a platform for addressing transport concerns in the back-end phase that have the potential to impact the transport of radioactive materials. Moreover, the Working Group is involved in sharing and disseminating best practices for the transport and packaging of waste materials. It endeavours to offer an industry perspective on these issues and communicates its opinions to the IAEA as and when deemed appropriate.

Among the key projects in 2023, the Working Group made advancements with the new type of waste package through the regulatory revision process, exploring innovative cask decommissioning methods, identifying the benefits and challenges of transferring cask Design Authority and ownership and addressing any potential interface issues between the various stages of the Back End fuel cycle.

The focus on these initiatives is aimed at creating greater sustainability and efficiency in our operations. By reducing waste, cutting costs and maximising valuable resources, we are working towards a more environmentally conscious and economically sound future. In particular, the development of the new waste package is a testament to our commitment to these goals, streamlining our operations and minimising the need for multiple shipments. In addition, this aligns with government targets for reducing carbon emissions, highlighting the crucial role that our work will play in building a better, more sustainable future.

The primary objective of the WG will be to effectively predict future developments that may have an impact on packaging and transportation activities and proactively manage potential risks. Members and regional representatives will provide input, while selected organisations will also be consulted for their insights. A particular focus will be on managing waste from both reactor operations and decommissioning processes.

SPENT FUEL MANAGEMENT AND STORAGE WORKING GROUP

Working Group Chair:
Alan Moses
Business Change Authority.
Spent Fuel Management.
Sellafield

Working Group Secretary:
Yukio Okabe
Engineering and EPR Specialist
yukioo@wnti.co.uk

For the past five years, the Back-End Program's Spent Fuel Management workstream, which is now referred to as a Working Group, has been showcasing their efforts at WNTI.

They have been sharing their knowledge on the transport and management challenges of Spent Nuclear Fuel (SNF) in the United Kingdom. The team has had the privilege of working alongside UK-based colleagues but is now seeking to expand its reach to international organisations like the Nuclear Energy Authority to achieve greater alignment and collaboration in tackling the issue.

Presently, the working group comprises five members based in the UK from Sellafield Ltd (SL), Nuclear Transport solutions (NTS), Nuclear waste services (NWS) and WNTI. The group is tasked with addressing the long-term strategy for the wet storage, conditioning and transport of SNF at SL, followed by its disposal at the Geological Disposal Facility (GDF). This initiative takes into account all SNF owned by the UK that will be stored wet.

To achieve its objective, the group has identified four initial sub-workstreams:

1. Near-term site operations, transport and interim storage.
2. Medium-term monitoring and management of SNF until 2080.
3. Long-term conditioning and transport of fuel to the GDF by 2080.
4. Any future changes in strategy that delay the transfer of SNF to the GDF and tactical challenges beyond 2080.

Initially, the aim of the project is to share its findings with WNTI members, opening doors for international collaboration and the creation of a guidance document for extended wet storage of SNF. The group is also considering dry storage and welcomes interaction with the WNTI team. As the project is still in its infancy, updates will be presented through WNTI Portfolio Board and WNTI Semi-Annual Members Meetings.

/43

GENERATION PROGRAMME

MARITIME APPLICATIONS AND NUCLEAR PROPULSION (MANP) WORKING GROUP

Working Group Chair:
Mikal Bøe
CEO, COREPOWER

Working Group Secretary:
Captain Simon Chaplin
Maritime and Security Specialist
simonc@wnti.co.uk

To reduce carbon emissions in energy-intensive industries and international shipping, a significant increase in atomic power deployment is necessary.

The Maritime Applications and Nuclear Propulsion (MANP) working group was formed to tackle this challenge and facilitate the deployment of next-generation nuclear reactors at sea.

The working group provides a platform for members to create and discuss regulatory frameworks for nuclear deployment at sea, with a focus on collaborating with the International Maritime Organization (IMO) and International Atomic Energy Agency (IAEA) to revise current regulations. Moreover, the group will join the discussion that will ensure adequate insurance coverage for these assets. To achieve these objectives, the working group will undertake targeted workstreams.

- Class Rules and Maritime Safety
- Operating standards and Crew training
- Nuclear security
- Connection and collaboration

The Maritime Applications and Nuclear Propulsion Working Group has been working hard, through its 3 sub groups, to complete a gap analysis of the regulatory environment for Floating Nuclear Power Plans and nuclear powered civilian merchant ships. This has been focused around Chapter 8 of the International Convention for the Safety of Life at Sea (SOLAS), 1974, IMO Resolution A.491 (XII) The Code of Safety for Nuclear Merchant Ships. This code dates back to 1981 and was written purely with water cooled reactors in mind.

This gap analysis will determine how this code would need to be revised to encompass the new nuclear technologies that are being developed for civilian maritime use.

During the IMO Maritime Environmental Safety Committee (MEPC) Meeting 80, held at the IMO HQ in London, 3-7 July 2023, Mikal Boe was able to present an update on the progress of this gap analysis and also to give information on how nuclear powered ships and FNPP's will look. This followed up from the presentation that Mikal gave at the Maritime Safety Committee (MSC) Meeting 106 in November 2022.

The gap analysis will be presented to the MANP WG meeting during the WNTI Winter Semi-Annual Members Meeting from 5 - 7 December 2023.

2024 will be a busy year for the MANP WG. The gap analysis will be offered to the Member States of the IMO in an information document that they can use should they decide that a revision of SOLAS Ch.8 is necessary. The IMO Maritime Safety Committee Meeting 108 will take place in May 2024. It is through MSC 108 that WNTI will introduce the information paper. As well as introducing this paper in the MSC Plenary, WNTI will also give a presentation, at the end of one of the day's sessions, expanding on the findings of the gap analysis and how the future of nuclear for civilian maritime may look.

NEW NUCLEAR WORKING GROUP

Working Group Chair:
Ben Whittard
Managing Director
Nuclear Transport Solutions (NTS)

Working Group Secretary:
Captain Simon Chaplin
Maritime and Security Specialist
simonc@wnti.co.uk

Net zero needs nuclear - The recently established new nuclear working group has been created to help members enable the successful roll out of small modular and advanced nuclear technologies globally, contributing to the efforts to move away from fossil fuels and improving energy security.

We will do this by engaging with industry partners, exploring the important role transport will play and seek to proactively identify and solve issues and challenges we may face. The working group will also act as a vehicle to offer a single voice to important stakeholders such as the IAEA and regulators globally.

Task forces will be set-up to explore specific objectives that will be reported back to the working group who will then decide on the WNTI position. These task forces will be able to invite industry experts from external organisations to attend/observe meetings and workshops. We will also engage with industry partners such as front-end fuel suppliers (including mining, conversion, enrichment, deconversion and fabrication), reactor vendors, utilities and associated supply chain members.

Working Group Objectives:

- Ensure transport is considered early in the design of new nuclear technology, the siting phase for new nuclear installations and in any waste management decisions.
- Explore the impact of advanced nuclear fuels, such as HALEU, on the transport sector (e.g. regulatory, supply chain).
- Contribute to the advocacy towards new nuclear power and the safety, security and reliability of the transport sector.
- Engage with regulators and policy makers on the impact of new nuclear.

/45

ENABLING PROGRAMME

POLICY AND REGULATION DELIVERY STREAM (FORMALLY SSR-6 WORKING GROUP)

Working Group Chair:
Steven Crane
Transport Safety & Security Expert, ORANO NPS

Working Group Co-chair:
Daniel Fisher
Lead Licensing Engineer, Nuclear Transport Solutions (NTS)

Working Group Secretary:
Elisa Penda
Transport Specialist
e.penda@wnti.co.uk

Before 2023, the Policy and Regulation Delivery Stream (P&RDS) was known as the SSR6 Working Group.

It is a standing group composed of experts from the WNTI Membership and external consultants (where necessary). The P&RDS Working Group is concerned with safety regulations that apply to the transport of radioactive materials and have an impact on the WNTI Membership. Specifically, in 2023, the focus is primarily on the fuel cycle industry and nuclear power plants. The P&RDS's primary role is to monitor the United Nations Organisation specialised agencies committees, which establishes dangerous goods transport safety regulations. In particular, the IAEA TRANSSC (Transport Safety Standards Committee of the International Atomic Energy Agency), as well as its associated TTEGs (TRANSSC Technical Expert Groups) and WGs (Working Groups), with a specific emphasis on transport safety standards.

Key 2023 work:

- The Policy and Regulation Delivery Stream (P&RDS) has been to participate to the review cycle of the IAEA regulations for the Safe Transport of Radioactive Material (SSR-6) and its Advisory Material (SSG-26). It will be reviewed in 2024.
- Throughout the year, experts meet via conference call meetings for to prepare the IAEA TRANSSC committee and to review/to discuss WNTI proposals to contribute to SSR-6 draft cycle review.

Goals over the next 10 years:

- Participate in TRANSSC committee meetings.
- Contribute to TRANSSC Technical Expert Groups (TTEG: Criticality, Package Performance and Assessment, Transport Operational Matters and Radiation Protection).
- Analyze IAEA proposals documents.
- Create a WNTI regulatory hotline.
- Review, update and draft WNTI publications: "Standards" "Information papers" "Good Practice Guides" "Fact Sheets".
- Stay informed and participate in the discussions of upcoming regulatory changes under discussion at other IAEA Working Groups and other regulatory bodies e.g., ICAO, IMO, UNECE, etc.

EMERGENCY PREPAREDNESS AND RESPONSE WORKING GROUP

Working Group Chair:
Hirotaka Nojima
Assistant Manager
Nuclear Fuel Transport Co., Ltd. (NFT)

Working Group Secretary:
Yukio Okabe
Engineering and EPR Specialist
yukioo@wnti.co.uk

The establishment of this working group has created a platform for progressing discussions around Emergency Preparedness and Response (EPR).

The first meeting was held in July 2022 at the WNTI SUMMER SAMM in Belgium. One of the key objectives of the group is to improve the EPR capabilities of its members. To achieve this aim, we plan to share knowledge gained from exercises and potentially develop best practices.

Additionally, the Working Group aims to support the IAEA Emergency Preparedness and Response Standards Committee (EPReSC) by identifying expected changes to the EPReSC guidelines related to transportation and proposing revisions.

Key 2023 work:

- Drafting transport incidents database and map.
- Identifying the ideas for a WNTI Publication on nuclear transport EPR.
- Collaborating with the IAEA through reviewing the international guidelines.

Key 2024 work:

- Establishing incidents database and map and developing them.
- Releasing a first WNTI publication on nuclear transport EPR.
- Seeking another good way to exchange lessons learned among WG members.
- Continuing to collaborate with the IAEA through reviewing the international guidelines.

Objectives

All over the world, transport of radioactive materials has been operated every day. The fact is that there has never been a transport incident that has caused significant radiological damage to people or the environment for more than 50 years. However, as we have already learned from the great east Japan earthquake, continuous improvement without being satisfied with current capacity is crucial. Based on this principal recognition, we will act to achieve below objectives.

1. To identify emergency preparedness and response issues that affect radioactive material transport and establish WNTI position for the issues.
2. To provide a forum to exchange information regarding transport emergency among the WG members.
3. To provide useful information when WG members establish their arrangements for EPR.

"This EPR WG strives to be the international forum for collaboration on prevention, preparedness and response issues in order to advance risk mitigation and improve response capacity. We will make an effort so that we can provide an active forum throughout next 25years for the industry members."

- HIROTAKA NOJIMA
EPR WORKING GROUP CHAIR

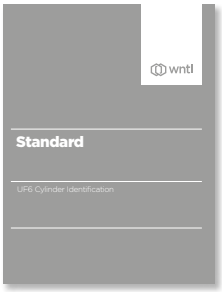
/47

OUR PUBLICATIONS

Welcome to WNTI's Publication Library. Access our comprehensive resources that include our distinguished Standards, comprehensive Information Papers, practical Good Practice Guides and insightful Fact Sheets.

Each of these resources have been meticulously compiled by industry professionals to support, guide and inform in every aspect of nuclear transport. Best of all, they are available for free PDF download, ensuring our wealth of knowledge is easily accessible to anyone interested in or working within the nuclear transport industry.

Access all our publications here: www.wnti.co.uk/publications



WNTI Standards

Standards are documents that provide generally accepted industry practices and methods that, when followed, will ensure consistent and regulatory-compliant radioactive material transport operations.

WNTI Standard – UF6 Cylinder Identification

WNTI Standard – Packaging and Transport of Uranium Concentrates

FEATURED PUBLICATION

Fact Sheet on Media and Communications - Uranium Ore Concentrates (UOC)

We live in a world where communications, and in particular fast communications, is expected by all. So readily, and in times of emergency, the first message broadcast is the first one believed! As the nuclear transport industry can be put under the spotlight by the various stakeholders, WNTI realised the need to have effective tools in place to respond to any dialogue that may develop regarding nuclear transport.

The Fact Sheet on Media and Communications - Uranium Ore Concentrates (UOC) sets out clear and concise information and messaging that can be used by our stakeholders when responding to media enquiries. This fact sheet in intended to be understood by both technical and non-technical people and is aimed at persons having little on no knowledge of the nuclear fuel cycle or the transport of radioactive material. Yet it still makes sure that reader is equipped with the full, unbiased, facts regarding the transport of Uranium Ore Concentrates.

The fact sheet first explains what Uranium is, where it occurs, its hazards and its uses. The reader is then guided through the production of UOC, packaging, transport and labelling etc.

The fact sheet then describes the safety precautions and what actions should be expected in the event of an incident, including clean up. This fact sheet will reassure the reader that although UOC is a radioactive material it presents a very low external hazard and, when the applicable regulations are complied with, it can be safely transported.

Scan the QR code to download now:

WNTI Information Papers

Information Papers provide general and historical information related to the transport of radioactive materials and the regulations governing the activity.

Information Paper – How to interpret the information displayed on the CSC plate of an ISO general purpose container

Information Paper – Interpretation of the recommendations contained in the Appendix IV of SSG-26 (Rev. 1) – 2018 Edition

Information Paper on Calculating Activity for Natural Uranium

Information Paper – New Fissile Exception Provisions in the IAEA Transport Regulations (SSR-6)

Information Paper – WNTI Glossary

Information Paper – Nuclear Fuel Cycle Transport – The IAEA Regulations and their Relevance to Severe Accidents

Information Paper – Radiation Dose Assessment for the Transport of Nuclear Fuel Cycle Materials

Information Paper – Radioactive Materials Transport The International Safety Regime – An Overview of Safety Regulations and the Organisations Responsible for their Development

Good Practice Guides

Good Practice Guides are prepared by WNTI to assist and guide organisations involved with the transport of radioactive materials to comply with International safety and security regulations by offering techniques that have been successfully implemented.

Good Practice Guide – WNTI/ WINS – Nuclear Transport Security Version 2.0

Good Practice Guide – Spent Nuclear Fuel Safe Storage

Good Practice Guide – Transport of UN 3507

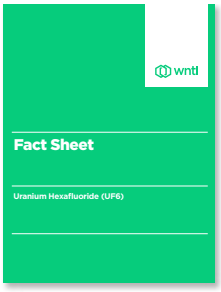
Good Practice Guide – Installation of Valves and Plugs in UF6 Cylinders

Good Practice Guide on the Preparation of Natural Uranium Samples in an Excepted Package

Good Practice Guide – Communicating Radioactive Materials Transport

Good Practice Guide – Radiation Protection Programmes for Road Carriers, Sea Carriers and Port Handlers

Good Practice Guide – WNTI Transport Principles



Fact Sheets

Fact Sheets provide focused information on specific areas of radioactive materials transportation.

Fact Sheet – Quick Facts on the Transport in the Nuclear Fuel Cycle

Fact Sheet – Nuclear Fuel Cycle Transport – Back End Materials

Fact Sheet – Media and Communications – Uranium Ore Concentrates (UOC)

Fact Sheet – Alternative Solution for Higher Dose Wastes (Type IW Package)

Fact Sheet – The Safe Transport of Uranium Ore Concentrates

Fact Sheet – The INF Code and Purpose-Built Vessels

Fact Sheet – Uranium Hexafluoride (UF6)

Fact Sheet – Transport of Unpackaged Surface Contaminated Large Objects

Fact Sheet – Package Types used for Transporting Radioactive Materials

Fact Sheet – Safety Regulations Governing Radioactive Materials Transport

Fact Sheet – Industry Interpretation of TI and CSI Limits for the transport of UF6 packages by Sea

Fact Sheet – Nuclear Liability for Transport

Fact Sheet – Nuclear Fuel Cycle Transport – Front End Materials

ORGANISATIONS & PARTNERSHIPS

GLOBAL PARTNERSHIPS ARE KEY TO DRIVING SUCCESS IN THE NUCLEAR TRANSPORT INDUSTRY.

/50

Operating on a global platform, the World Nuclear Transport Institute (WNTI) is dedicated to supporting the nuclear transport industry. The institute recognises the importance of partnerships and actively seeks collaborations with global industry and intergovernmental organisations to improve security and safety in nuclear transportation.

These collaborations play a crucial role in promoting good practices and innovation in nuclear transportation. WNTI actively engages with partners, sharing technical expertise and guidance to achieve its mission of providing authoritative voice and world-class guidance on the safe and secure transport of nuclear materials. Through this global network, the institute makes a significant contribution to the sustainability and advancement of the nuclear industry worldwide.

WNTI remains committed to shaping nuclear transport policy and industry standards through its global network. This steadfast commitment enables the institute to continuously work towards the improvement and unification of safety and security within the worldwide nuclear transportation industry.

"I, Shazia Fayyaz, head of the Transport Safety Unit at the International Atomic Energy Agency (IAEA) would like to extend my warmest congratulations to WNTI on 25 years of service. I hope that WNTI's contribution to the noble cause of ensuring safety during transport of radioactive material will continue with uninterrupted zeal.

I would like to highlight that during the past 25 years, WNTI's collaboration with IAEA as an observer in the IAEA Transport Safety Standards Committee (TRANSSC) is well recognized among stakeholders. The contributions made by WNTI by proposing changes to IAEA transport regulation, and through active participation in TRANSSC Technical Expert Group's discussions and in the Working Groups related to denial of shipment and floating nuclear power plants are notable and commendable.

By working together, with determination and perseverance, IAEA and WNTI have collaborated on enhancing the global transport safety regime. There is still a lot more to do, with many potential opportunities and challenges ahead.

I am confident that the IAEA and WNTI will continue to work together and respond to the need for a robust transport safety infrastructure worldwide. To achieve this, let's recognize this landmark anniversary as a crucial step on a productive path. Congratulations on your 25th anniversary!."

- SHAZIA FAYYAZ
HEAD OF THE TRANSPORT SAFETY UNIT, INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA)

COLLABORATING WITH INTERNATIONAL ORGANISATIONS

International Atomic Energy Agency (IAEA)

Observer Status

www.iaea.org

International Maritime Organization (IMO)

Consultative Status

www.imo.org

International Organization for Standardization (ISO)

Category A Liaison Organisation

www.iso.org

International Civil Aviation Organization (ICAO)

Observer Status

www.icao.org

World Nuclear Association (WNA)

World Institute for Nuclear Security (WINS)

Nuclear Energy Institute (NEI)

World Maritime University (WMU)

nucleareurope

Nuclear Engineering International (NEI)

Nuclear Institute (NI)

Young Generation Network (YGN)

Women in Nuclear UK (WiN UK)

Institute of Nuclear Materials Management (INMM)

Cargo Incident Notification System (CINS)

Canadian Nuclear Association (CNA)

Chinese Nuclear Society (CNS)

World Association of Nuclear Operators (WANO)

Institute for Radiation Protection and Nuclear Safety (IRSN)

Nuclear Industry Association (NIA)

International Air Transport Association (IATA)

PATRAM 22

THE INTERNATIONAL SYMPOSIUM ON THE PACKAGING AND TRANSPORTATION OF RADIOACTIVE MATERIALS

The International Symposium on the Packaging and Transportation of Radioactive Materials (PATRAM 22), held in the beautiful Juan-les-Pins from the 11th to the 15th of June 2023, was a monumental success.

Over the course of the symposium, PATRAM 22 hosted a diverse array of 259 technical presentations on various topics including the development of new packaging types and advancements in new nuclear technology. Additionally, six plenary sessions covered important issues such as the challenges facing the industry, changes in regulatory policy and the future of transport security, including concerns related to cyber and war, openness to society and the attractiveness of the transport industry to the young generation. The conference aimed to provide valuable insights and discussions on these important issues.

The PATRAM 22 symposium illuminated how bringing industry leaders and influential players together can spur collaboration and advancement. Exchanging experiences and solutions enriched everyone's understanding of contemporary challenges, especially the essential matter of ensuring safe and secure transportation methods for radioactive materials. The dialogue emphasised not only improved transportation techniques, but also stricter protocols to avoid any inadvertent risks to the environment and humanity.

Industry professionals capitalised on this prestigious gathering as a chance to network and nurture promising partnerships. Various robust debates sparked stimulating conversations that reached beyond the technical sessions.

Attendees came away from PATRAM 22 not only more knowledgeable, but more connected, inspired and determined to implement these valuable learnings to real-world problems. To conclude, PATRAM 22 wasn't just a meeting of minds; it was a unison of shared ambitions, curiosities and commitments to enhancing radioactive materials packaging and transportation.

/52

In all its facets, the PATRAM 22 was indeed a great success. It served as a dynamic platform for connecting with industry professionals, stirring engaging discussions, fostering fresh ideas and undoubtedly laying down robust strategies to transform the radioactive materials logistics domain for the future. The experiences, relationships and ideas cultivated over this extraordinary five-day event will indubitably shape the direction of the sector in the forthcoming years.


5
DAYS
750
ATTENDEES
36
EXHIBITORS
147
YOUNG PROFESSIONALS
6
PLENARY SESSIONS
28
COUNTRIES
259
TECHNICAL PRESENTATIONS
64
POSTERS
10
OPENING ADDRESS SPEAKERS
16
AWARD WINNERS

Throughout the duration of the week, attendees at PATRAM 22 were presented with an invaluable opportunity to learn and share ideas in the thought-provoking technical poster exhibition.The exhibition offered intricate details, discoveries and emerging trends in the nuclear transport and packaging sectors. What's more, the exhibition hall provided the ideal space for attendees to actively engage in stimulating conversations and build meaningful relationships with some of the industry's top representatives.

As the week unfolded, it quickly became clear that PATRAM 22 was a vibrant and engaging social experience. A multitude of celebratory events were held throughout the week by various esteemed organisations. These fun-filled soirees provided the perfect escape for hardworking delegates to take a step back from their demanding roles, unwind and reconnect with industry colleagues after the turbulence seen in the last few years due to the COVID-19 pandemic.

Adding to the success of the week-long experience, the crowning jewel of the event was undoubtedly the Gala Celebration. Held at the majestic Belle Rives Hotel, a stunning location, overlooking the picturesque Mediterranean Sea, the hotel provided an utterly captivating backdrop, elevating the networking and socialising experience for all guests.

Yet another inspiring feature of this symposium was the prestigious Awards Ceremony. The ceremony recognised and celebrated the tireless efforts, impressive achievements and commendable contributions made by various individuals within the industry. Amidst the wave of applauds, respect and admiration, those bestowed with honours reveled in their well-deserved moment of glory.

"I DON'T HAVE A SINGLE OVERALL HIGHLIGHT – THE ENTIRE WEEK WAS A HIGHLIGHT!"

- ALASTAIR BROWN
WNTI CONSULTANT

Reflecting back, it becomes clear that PATRAM 22 was an enriching experience for everyone fortunate enough to attend. More than just an industry event, it emerged as a platform fostering a holistic approach to learning, inspiring cross-functional knowledge sharing and collaboration. The symposium embodied the perfect blend of serious work and enjoyment, infusing new vigour in the community.

Each attendee returned from the symposium not just richer in terms of their understanding of the industry's nuances, but also bearing precious memories of joyful celebrations, meaningful networking and the pride and motivation gleaned from the recognition of exceptional work in the nuclear and transportation community. Without a shadow of a doubt, PATRAM 22 was a milestone event that will resonate in the minds of the attendees for a long time to come.

On behalf of the PATRAM 22 Organisation Committee, we extend our heartfelt gratitude to all attendees, speakers, exhibitors, sponsors and supporters who made this event a success. Your engagement and dedication play a crucial role in fostering advancements in our sector. We appreciate your valuable insights, knowledge sharing and active participation, and we hope you found the conference enlightening and productive. Thank you for making PATRAM 22 a rewarding and memorable experience.

We look forward to seeing you again at PATRAM 25 from 27th July to the 1st August 2025 in San Antonio, Texas! Save the date now!

P22 HOSTS

wnti

INMM INSTITUTE OF NUCLEAR MATERIALS MANAGEMENT

IN PARTNERSHIP

IRSN INSTITUT DE RADIOPROTECTION ET DE SÛRETÉ NUCLÉAIRE

orano

Sfen

MEDIA PARTNERSHIP

NUCLEAR ENGINEERING INTERNATIONAL

/55

PATRAM 22 AWARD WINNERS

/56

We are pleased to share the PATRAM 22 award winners for their significant contributions to PATRAM and the nuclear transport industry.

Their innovation, expertise and unwavering commitment will contribute to safe and secure transportation of nuclear materials worldwide. From enhancing the safety protocols to innovating the methods of radioactive material packaging, each awardee has revolutionised our approach to nuclear material handling, contributing enormously towards creating a safer, sustainable future.

These industry leaders exemplify resilience, demonstrating the astounding heights one can achieve through unwavering dedication and robust research. Their notable endeavours in a highly technical and specialised sector like nuclear transport not only warrant recognition and appreciation but also set high benchmarks for the nuclear industry globally.

We applaud their significant strides in bridging technical gaps and advancing safety standards.

Clive Young Award for PATRAM 22 for best paper presentation by a young Scientist, Researcher or Engineer:

Gabriel Rodriguez (Session 064) from NWMO for "Routing Considerations for Transport of CANDU Used Nuclear Fuel".

Clive Young Award for PATRAM 22 for best poster presentation by a young Scientist, Researcher or Engineer:

Samuel Varghese (Poster 63) from Lawrence Livermore National Laboratoty (LLNL) for "Designing Radiation Shielding and Criticality Experiments for Students".

PATRAM 22 AOKI Awards for Long-Term Contribution to PATRAM:

Cecil Parks
Hiroaki Taniuchi
Franz Hilbert

PATRAM 22 AOKI AWARDS for Distinguished Paper Presentations:

Dr. Frank Jütteman from GNS (Session 10) for "Experimental Proof of Protection against Aircraft Impact".

Stefano Caruso from KKG (Session 050) for "Measurement of Peak Cladding Temperature in SF Cask during fuel Transfer".

Rebecca Schaller from SANDIA National Laboratory (Session 24) for "Probabilistic Model for Stress Corrosion Cracking of SNF dry Storage Canisters".

PATRAM 22 AOKI AWARDS for Distinguished Poster Presentations:

Vijay Bhatti from Nuclear Transport Solution (NTS) (poster 4) for "Application of Human Factors in a Transport Package Design Safety Case".

Brigitte Latour from ORANO NPS (poster 45) for "Challenges and Perspectives for Transport of Uranium above 5%".

Martin Neumann from BAM (Poster 39) for "Friction Coefficients for Wood-Wood and Wood-Steel Interfaces in Impact Limiters for Transport Casks".

PATRAM 22 AWARD for Long-Term Organisational Contribution:

OAK RIDGE NATIONAL LABORATORY (ORNL)

Chairman's Organisational Award:

Institute of Nuclear Materials Management (INMM)

Chairman's Individual Award:

Daiichiro Ito

PATRAM Ronald B. Pope Award for Unwavering Commitment to the PATRAM Symposia:

Jeff England

Chairman's Award – Individual Long-Term Contribution:

Henry-Jacques Neau

PATRAM 22
WNTI PERSPECTIVE

EILEEN SUPKO

WNTI NORTH AMERICAN REGIONAL REPRESENTATIVE

I was honored to chair a session on Spent Nuclear Fuel on June 13 with Steve Sisley from NAC International, Inc. (NAC). We had three speakers – Ulf Stahmer from Canada's Nuclear Waste Management Organization (NWMO); Steve Maheras from the U.S. Pacific Northwest National Laboratory (PNL); and Bernd Roith, from the Swiss Federal Nuclear Safety Inspectorate ENSI.

I'd like to focus on Mr. Stahmer's presentation, as the NWMO's approach to spent fuel transportation planning is unique and may be a lesson for us all.

Mr. Stahmer spoke about the NWMO's process for incorporating public feedback into its transportation technical and public engagement work programs. Based on discussions with the public and indigenous communities in Canada, the NWMO came to a realization that an iterative approach would be needed for spent fuel transportation planning. The iterative approach includes: providing information on spent fuel transportation planning for public comment; assessing comments received; and incorporating feedback into future planning. The public response to this approach was met with high praise as it provided transparency through regular reporting by the NWMO and the approach went beyond regulatory requirements.

Mr. Stahmer characterized the NMWO's spent fuel transportation planning as being the beginning of an in-depth conversation with stakeholders, which would provide a systematic approach to transportation of spent fuel based on community input, industry best practices and lessons learned internationally.

Based on its discussions with Canadian stakeholders on its spent fuel transportation program, NWMO has identified topics about which the public are interested in gaining a better understanding including:

- How decisions about transportation routes will be made.
- How transportation packages perform under severe accident conditions.
- Accident probabilities and how to minimize these probabilities.
- Security protocols and procedures that will be implemented for spent fuel transport.
- Potential environmental impacts of transportation.
- How to incorporate new and emerging technologies into the transportation program.

The very public engagement-centered approach to spent fuel transportation planning and the public response to the NWMO's approach is refreshing. So often, engineers and technicians planning spent fuel transportation programs dismiss concerns because we understand the robust packaging, package performance and the very low probabilities of severe accidents. We take a "trust us" position. In contrast, the NWMO's iterative approach to transportation planning doesn't say "trust us"; rather, the approach ensures that the public's concerns about technical issues are heard, additional information is provided to allow the public to better understand these issues and their concerns addressed in future plans.

ALASTAIR BROWN

WNTI CONSULTANT

The WNTI booth was a great focal point – the first thing attendees would see coming into the exhibition area. It also provided a convenient location for delegates to have a rest or catch up with colleagues.

There were also lots of organisations interested in the work of WNTI, its ability to influence regulation and the services to members. Hopefully some of these will be able to join the WNTI membership in the coming months to further strengthen WNTI's knowledge base and reach across a diverse range of radioactive materials transport industry.

"Fantastic opportunity to speak to WNTI members and prospective members and to hear about the current and future transport challenges."

WNTI and NTS are both strongly involved in the Denial of Shipment working group at the IAEA. Both Simon Chaplin and myself were able to take part in a well-attended plenary session discussing the problems and causes of denials and delays. We also contributed to the discussion session later the same day to discuss with delegates their experiences of denials and delays. This helped identify additional aspects (such as insurance) for the IAEA Denial of Shipment working group to consider.

The panel session on new nuclear was a fascinating insight into the challenges – some of which are currently being addressed in the Maritime Applications and Nuclear Propulsion working group. There is a pressing need to develop these new nuclear reactors to address the challenges of net zero – however the pace desired will be a real challenge both to industry in developing the transport solutions and to regulators to establish the necessary regulatory framework (which will need to be significantly different to the current arrangements).

"New nuclear will clearly be a challenge to the transport industry and regulators in the coming years. This is a key area where WNTI can help industry to work on solutions to these challenges and present these to regulatory authorities."

YUKIO OKABE

WNTI ENGINEERING AND EPR SPECIALIST

It was second time for me to participate in PATRAM but my roll was totally different. I attended another PATRAM several years ago as a just presenter.

In this PATRAM, I had been in the WNTI booth almost all time during the PATRAM and I chaired the session of Structural Analysis 2. Also, I attended several corporate sponsored dinners over the PATRAM including the gala dinner. Overall, PATRAM gave me incredible opportunity to communicate with people who are knowledgeable experts on the transport.

I met diverse group people at the WNTI booth. The most impressive discussion was about transporting waste. We talked about IP-4 package which WNTI Back-End transport has been discussing so that the idea is incorporated into international transport regulations as their organization has been involved in transporting waste. Through the discussion, I could find again that this idea is beneficial for not only WNTI member companies but also whole industries.

Other things I found was that non-WNTI member companies do not necessarily know about WNTI well even though they are related to transport industry. However, I am sure that this opportunity worked very well for promoting WNTI and continuous promotion for WNTI must be needed to keep nuclear moving by bringing the transport industry together.

My family joined me after the PATRAM. We stayed in Nice for 3 nights, which was fantastic. I found that PATRAM provides a nice time for not only business but also building my family relationship.

/61

INDUSTRY WORKSHOP

ADVANCED REACTORS: TRANSPORTATION & THE FRONT-END FUEL CYCLE FOR HALEU

This Autumn, with the support of member sponsors NTS and URENCO; WNTI held a Technical Industry Workshop in Washington DC, USA to explore the theme of Advanced Reactors - Transportation and the Front-end Fuel Cycle for HALEU.

The workshop brought together industry experts to discuss the future of advanced nuclear reactors and their role in a sustainable energy future. The main focus looked at transportation and the front-end fuel cycle for LEU+ (Low Enriched Uranium) and HALEU (High-Assay Low-Enriched Uranium) – a fuel that is currently being developed for use in advanced reactors. Attendees discussed the challenges and opportunities associated with transporting this new fuel, as well as the technical and economic considerations involved in the front-end fuel cycle.

Overall, the WNTI Industry Workshop was an invaluable opportunity to bring together experts from diverse fields to discuss the future of nuclear energy. We are excited to see the continued progress and development in this field and look forward to future workshops.

DAY 1 SUMMARY

Sponsored and Chaired by Urenco Global.

The day's events began with Eileen Supko of Energy Resources International, Inc. and World Nuclear Transport Institute (WNTI) giving an overview of the market context in the last two to three decades.

Session 2 featured John Cash of Ur-Energy Inc. discussing mining, Eileen Supko spoke on conversion, Sarah Riedel, MBA of Urenco Global discussed enrichment, followed by Earl Saito of Global Nuclear Fuel, L.L.C. and Kallie M. of Westinghouse Electric Company talking about deconversion and fabrication. Session 2 ended with Wyatt Padgett, P.E., MBA of Urenco Global addressing the topic of licensing for existing Fuel Cycle Facilities.

Session 3 saw Sarah Riedal and Joel Kruehler of Urenco Global leading the discussion on contract management. The day's events concluded with a Q&A panel session.

"Day 1 wrapped and I looked forward to day 2. Great content and aspecial venue. Everything about the workshop was perfect! Thank You!"

- MARK FUCICH, PRESIDENT AT DESCOTE INC

DAY 2 SUMMARY

Sponsored and chaired by Nuclear Transport Solutions (NTS).

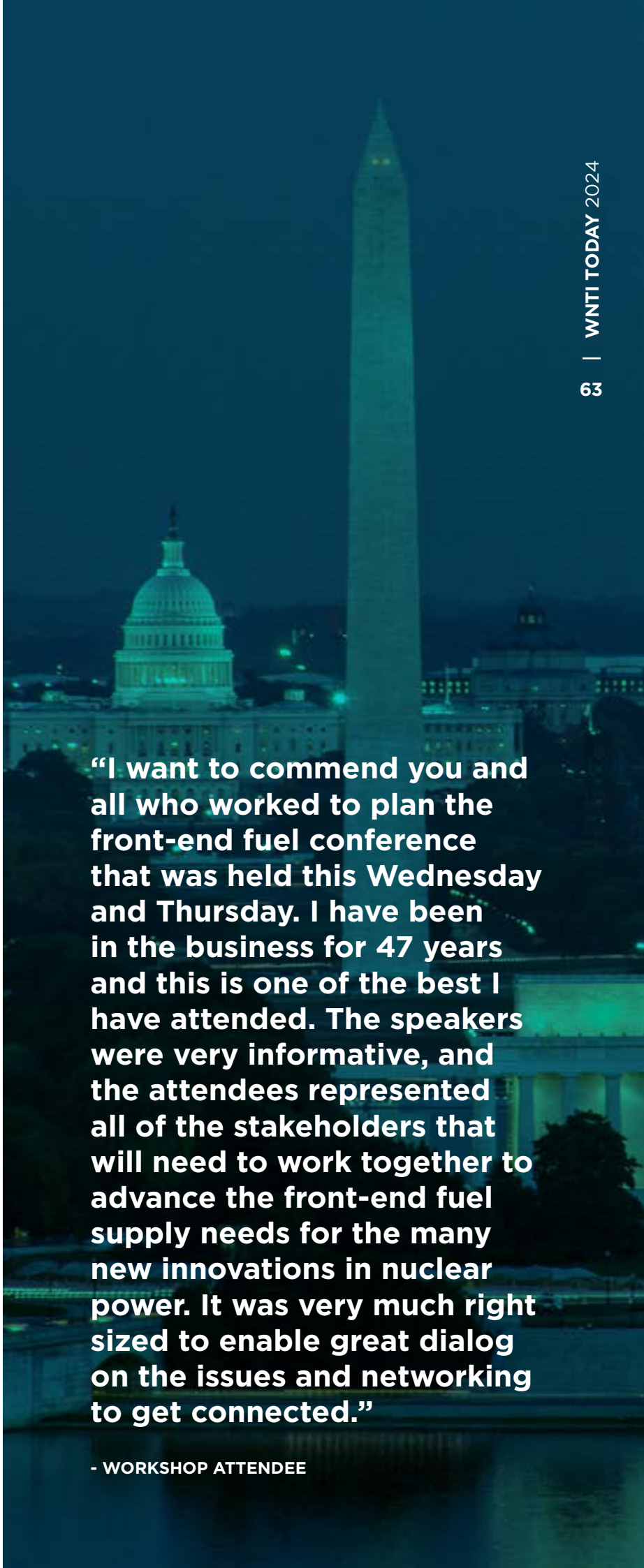
Ben Whittard of Nuclear Transport Solutions and Sarah Riedel, MBA of Urenco Global opened the days session, followed by remarks from Peter Buchan, representing World Nuclear Transport Institute (WNTI) and Nima Ashkeboussie of Nuclear Energy Institute.

Session 1 was all about packaging for advanced fuels (LEU+ and HALEU) with speaker Rhianne Boag of NTS, giving an overview of packaging regulations, followed by Jay Thomas of Orano who spoke about packaging of UF6 today. Finally, a panel discussion which considered packaging for LEU+ and HALEU with Michael McMahon of NAC International, Rhianne Boag of NTS, Jay Thomas of Orano and Joel Kruehler of Urenco Global.

Session 2 looked at an overview of current regulations and its restrictions. Michael McMahon gave an overview of transportation safety regulations. Next, George Burnett of NTS spoke about transport security regulations. Followed by Joel Kruehler who discussed the topic of restrictions in current transport regulations. Session 2 closed with a Q&A session.

The 3rd and final session featured some special topics, including 'Experience in shipping HALEU' with Peter Buchan of NTS and Jack Edlow of Edlow International Company. Followed by a Security Panel with Greg Phillips of Secured Transportation Services LLC, Jason Karcz and Michael Shannon of Oak Ridge National Laboratory. The final topic was an important discussion on Denial of Shipments with Jack Edlow of Edlow International Company, Terry Soulsby of Nordion, Peter Buchan of WNTI and Kurtis Hinz of TAM International LP.

Finally, the workshop came to a close with a Q&A session moderated by Ben Whittard, NTS.



"I want to commend you and all who worked to plan the front-end fuel conference that was held this Wednesday and Thursday. I have been in the business for 47 years and this is one of the best I have attended. The speakers were very informative, and the attendees represented all of the stakeholders that will need to work together to advance the front-end fuel supply needs for the many new innovations in nuclear power. It was very much right sized to enable great dialog on the issues and networking to get connected."

- WORKSHOP ATTENDEE

Sarah Riedal, Urenco Global, tells us her thoughts on the WNTI Industry Workshop – Advanced Reactors: Transportation and the Front-end Fuel Cycle for HALEU

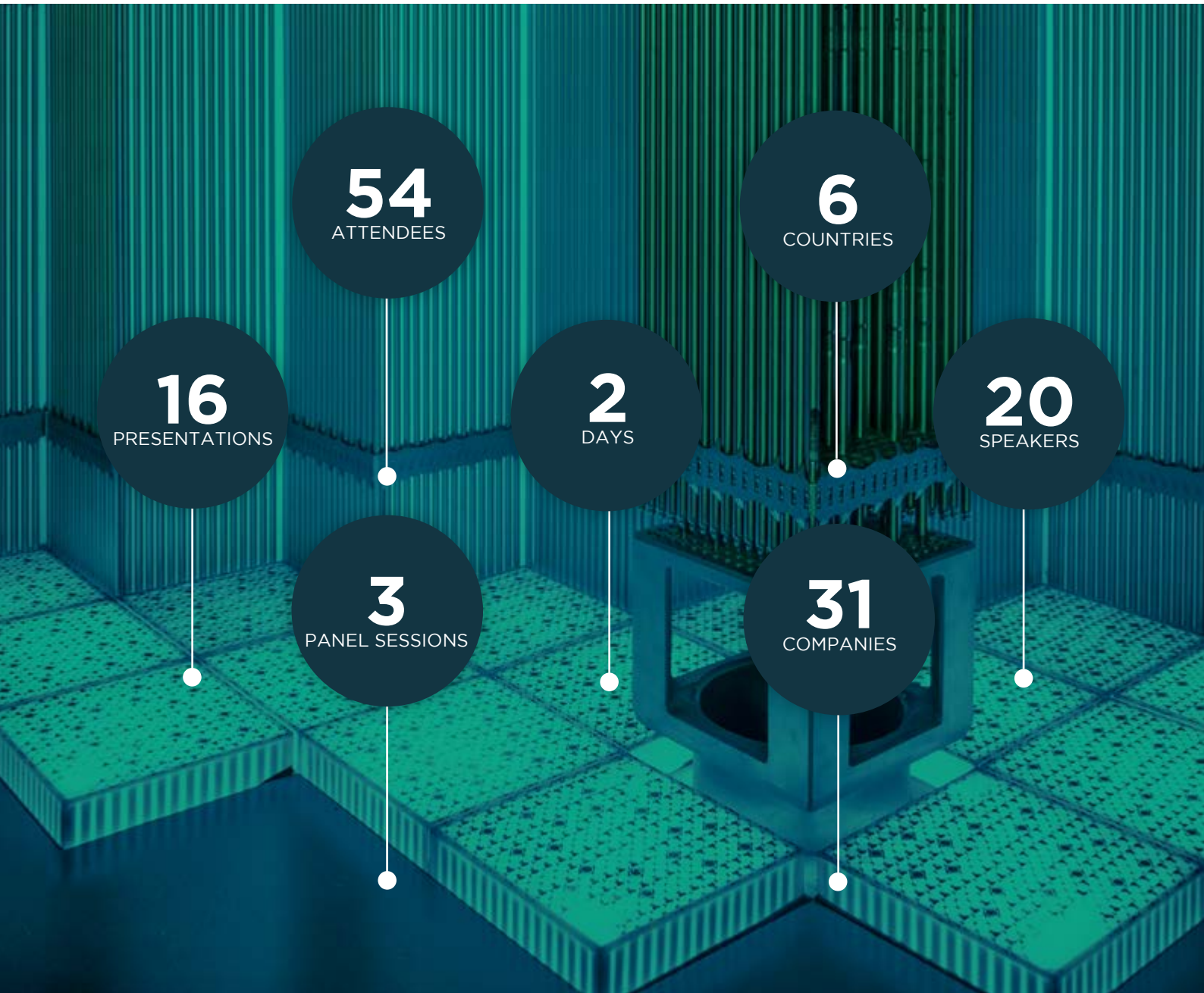
Why was it important for Urenco Global to sponsor this Industry Workshop?
"As the most globally diversified uranium enrichment producer in the world, Urenco understands the importance of a robust nuclear fuel supply chain to support the reactors of today and tomorrow."

Why was this Industry Workshop important?

"The event brought together front-end fuel cycle and transport experts and fostered an open discussion about the nuclear fuel market, challenges we've overcome and those ahead as we prepare for the production and transport of advanced fuels."

What did you enjoy during this Industry Workshop?

"We enjoyed a productive discussion engaging all aspects of the front-end of the nuclear fuel supply chain—from mine to reactor."



SAVE 10%

NUCLEAR ENGINEERING INTERNATIONAL

Don't miss out

Subscribe and read the very latest news and developments in the nuclear engineering industry.

The monthly magazine **Nuclear Engineering International** covering projects, developments and research, NEI provides a 'one stop' information resource tailored to the needs of the individual energy professional. With users in more than 100 countries, supported by weekly e-newsletters, social media coverage, printed material, and events, NEI not only covers all the key developments in the nuclear industry but puts them within the context of the drivers that are transforming the whole of the energy sector.

GREAT REASONS TO SUBSCRIBE

- NEI keeps you updated on all the latest news and developments, helping you stay ahead in the market.
- We provide the most comprehensive selection of case studies, project profiles and product news in the nuclear sector, meaning you're always in the know.
- Key industry figures share their insights in regular interviews and roundtable discussions, giving hints and tips on how to succeed in project development.

SUBSCRIBE TODAY QUOTING NEI1023

Call: +44 (0) 8451 551 845
cs@progressiveintelligence.com
www.neimagazine.com

DELAY AND DENIAL OF SHIPMENTS

Delay and Denial of Shipments are an explicit or implicit refusal to carry a shipment of radioactive material, though it conforms to the applicable Regulations.

In other words, a consignment of radioactive material is being packaged and transported in accordance with all regulations, it is labelled and documented correctly, all safety and security requirements are being met, both national and international … yet it is still being refused shipment.

This could be a Denial when a consignment is refused carriage at a point during its journey, such as prior to loading on to a ship, aircraft of other transport mode.

A Denial where a consignment cannot use a particular route due to policies in place somewhere along that route that prevent its carriage.

And where a consignment is Delayed because it is forced to use a longer route, because a more direct route is not available.

The IAEA has established the Denial of Shipment Working group, tasked with considering the options for addressing these issues, and the World Nuclear Transport Institute is a member of this working group.

The denial of shipment working group is supported by 3 sub-working groups (SWG):

1. SWG-1: DoS Data Collection, Analysis and Metrics
2. SWG-2: Possible Solutions for DoS Problems
3. SWG-3: Awareness, Training and Outreach

WNTI Specialist, Simon Chaplin has been appointed as Co-Chair to SWG-3, and WNTI Marketing and Communications Manager, Emily Midgley, is also a member of SWG-3 where she can offer her expertise on stakeholder engagement.

To facilitate the work of the Denial of Shipment Working group, the IAEA has engaged the services of a full-time consultant, paid with contribution from various stakeholder organisations including WNTI.

WNTI also conducts its own work directly supporting the WNTI member organisations who are faced with Denials and Delays, such as providing guidance and support when they experience denials of shipment of containers at seaports. This has included containers that were loaded with non-Radioactive Materials but that were later found to be contaminated with Naturally Occurring Radioactive Materials (NORM).

WNTI also writes articles for national publications explaining to the reader how denials and delays affect their everyday lives.

/66

NET-ZERO NEEDS NUCLEAR

SAFELY NAVIGATING TOWARDS NET ZERO: THE CRUCIAL ROLE OF SECURE NUCLEAR TRANSPORT

/68

The ongoing climate crisis is one of the most pressing issues we face today. With the negative impact of carbon emissions from fossil fuels becoming increasingly evident, there is an urgent need to shift towards renewable and sustainable energies.

However, while sources such as wind, solar and hydropower are excellent alternatives, they cannot combat the climate crisis alone.

In order to reach the ambitious net zero targets the UK has set, we believe that we must embrace nuclear power. The world's energy needs are growing at an unprecedented rate and we cannot solely rely on renewables and battery storage to provide us with sufficient energy. Sustainable and renewable energy sources must be integrated with other options such as nuclear to achieve the levels of energy output that we require.

Apart from powering homes, offices and hospitals, we also need vast amounts of energy to drive our industries such as steel, cement, paper and transport. It is critical to have an energy source that can provide us with the required power to keep up with these increasing demands without negatively impacting the environment.

To fully harness nuclear potential, it is essential that we prioritise safety and security in the use and transportation of nuclear and radioactive materials. This requires robust policies and regulations, overseen by organisations such as the International Atomic Energy Agency (IAEA), to ensure the highest standards are upheld. By prioritising safety and security, we can build public trust in nuclear power and pave the way for a sustainable future.

Additionally, robust safety measures play a crucial role in preventing accidents and incidents that could have far-reaching consequences. By promoting safe and secure transport of nuclear materials, we can move towards a greener future, reducing our carbon footprint while meeting growing energy demand.

Nuclear energy can provide a secure, reliable, low-carbon alternative to fossil fuels, as part of the mix with renewable energy sources. The development of large-scale reactors, advancements in small modular reactors (SMRs) and other new nuclear technologies requiring different fuels and transport packages creates an essential role for the World Nuclear Transport Institute (WNTI) to influence the evolution of regulation. We can help to ensure the highest standards are met when it comes to the transportation of nuclear and radioactive materials.

For over 25 years, WNTI has collaborated with technical experts from its global membership, policymakers, regulatory bodies and industry stakeholders to drive the development of standards and best practices for the industry. Their expertise and dedication are crucial in ensuring that nuclear materials are transported safely and securely, allowing us to harness the benefits of nuclear energy while minimising the risks.

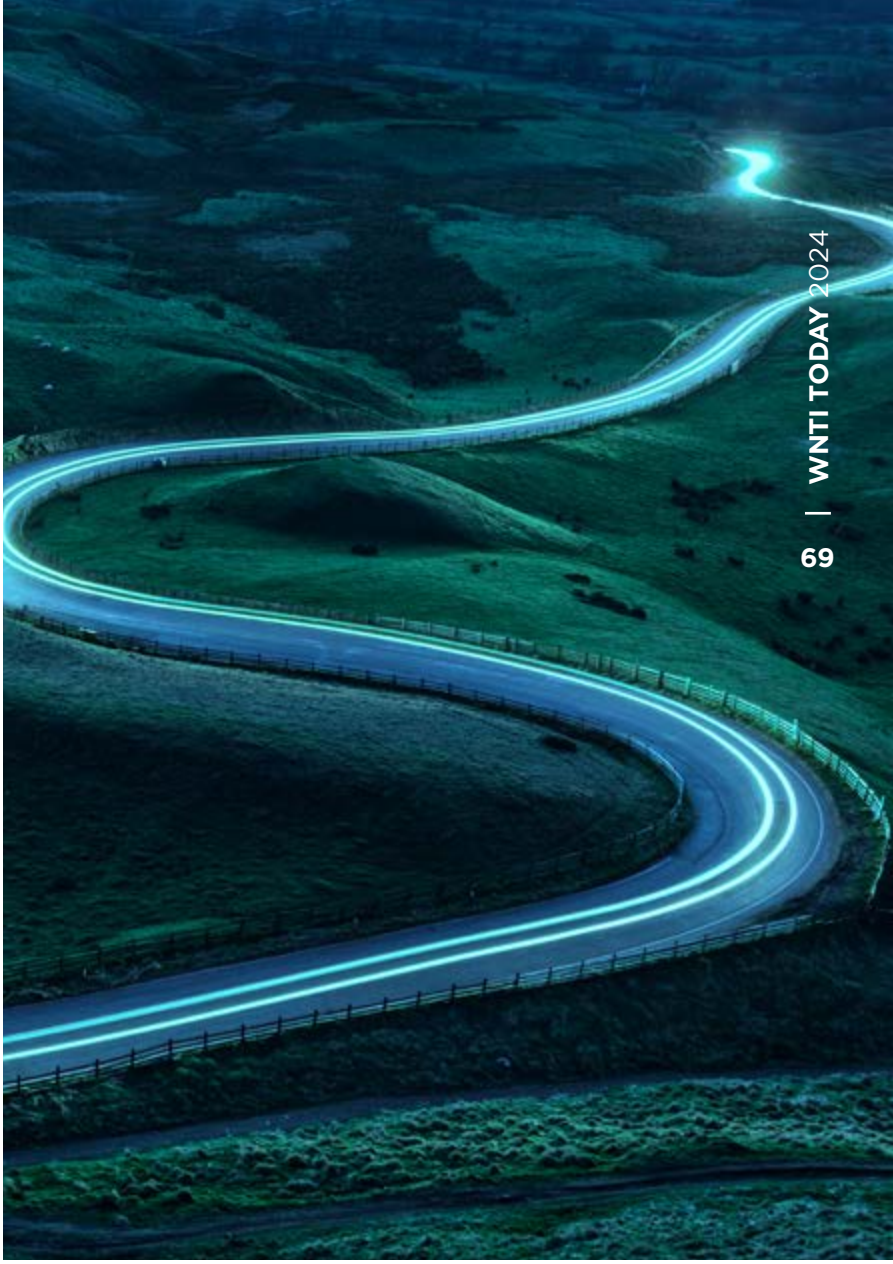
WNTI drives high standards in the nuclear transport industry, with working groups covering numerous areas, including front-end transport, emergency preparedness and nuclear propulsion.

WNTI's recently established New Nuclear Working Group – chaired by Ben Whittard, Managing Director, Solutions, of Nuclear Transport Solutions (NTS) – has been created to support WNTI members and set global standards to enable the successful roll-out of small modular and advanced nuclear technologies, contributing to the efforts to move away from fossil fuels and improving energy security. The group will do this by engaging with industry partners, exploring the important role transport will play, and seek to proactively identify and solve issues and challenges. The working group will also act as a vehicle to offer a single voice to important stakeholders such as the IAEA and regulators worldwide.

Policymakers and regulators have a critical role to play in achieving our green energy goals. As we strive towards net zero emissions, it is essential that they prioritise the development of policies and regulations that support the safe and secure use of nuclear energy and new nuclear technologies. By establishing robust guidelines and enforcing strict safety measures, policymakers can build public trust in nuclear power. Regulators, on the other hand, must ensure that these policies are adhered to and that the highest standards are maintained throughout the industry. Through their collective efforts, policymakers and regulators can create an environment that enables the safe and efficient transportation of nuclear materials, helping us to achieve our net zero goals while safeguarding the well-being of people and the environment.

"At a time when the use of variable renewables is growing, nuclear power makes a key contribution to energy supply security and grid stability"

- THE INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA)



Through its dedication and expertise, WNTI ensures that these materials are safely and securely transported, allowing us to harness the benefits of nuclear energy while protecting our planet. Policymakers and regulators must continue to prioritise safety and enforce strict guidelines to build public Nuclear has a key role to play in the UK's future secure energy mix trust and ensure a safe and efficient nuclear industry.

The World Nuclear Transport Institute is a dedicated membership and non-governmental organisation at the forefront of the global nuclear transport industry. We are here to support, advocate, and drive progress in this critical field. We pride ourselves on fostering diversity and inclusivity and recognising that industry collaboration is the foundation of progress. Our network proudly represents 40+ influential companies, offering a dedicated platform and the essential resources to drive meaningful change.

2024 EVENTS

JANUARY

10 January
WNA Transport Working Group
London, UK

11 January
INLA/WNA/WNTI Workshop on the Transport of Nuclear Material Liability, Insurance and Related Key Contractual Considerations
London, UK

17 January
Nuclear Fuel Supply Forum
Washington, USA

FEBRUARY

10th Nuclear Decommissioning & Waste Management Summit
London, UK

26 - 29 February
IAEA CN FNPP
Vienna, Austria

29 February
International Confex
London, UK

MARCH

8 March
International Women's Day

10 - 14 March
WM SYMPOSIA – Waste Management
Phoenix, USA

18 - 22 March
IMO MEPC 81
London, UK

21 - 22 March
Nuclear Energy Summit (partnership Brussels and IAEA)
Brussels, Belgium

27 March
WNTI Portfolio Board
London, UK

APRIL

8 - 12 April
IMO FAL 48
London, UK

15 - 19 April
IAEA Denial of Shipment Working Group
Vienna, Austria

16 - 18 April
World Nuclear Fuel Cycle (WNFC) 2024
Almaty, Kazakhstan

17 April
WNA Transport Working Group
Almaty, Kazakhstan

MAY

1 - 2 May
Reuters Events: SMR & Advanced Reactor 2024
Atlanta, USA

15 - 17 May
RAMTrans 2024
London, UK

15 - 24 May
IMO MSC 108
London, UK

18 May
International Day for Women in Maritime

Nuclear Energy Assembly

WiN UK Annual Conference

20 - 24 May
International Conference on Nuclear Security: Shaping the Future
Vienna, Austria

27 - 31 May
IAEA CSS – 55th Meeting
Vienna, Austria

JUNE

4 - 6 June
WNTI SUMMER SAMM

10 - 14 June
IAEA TRANSSC 48
Vienna, Austria

10 - 14 June
International Conference on the Management of Spent Fuel from Nuclear Power Reactors
Vienna, Austria

10 - 14 June
IAEA EPReSC 18th Meeting
Vienna, Austria

11- 14 June
IAEA NSGC 25
Vienna, Austria

JULY

2 - 3 July
International Nuclear Industry Summit – NIATR
Istanbul, Turkey

Radiological Protection Summer School
Cambridge, UK

6 - 12 July
#NetZeroWeek – UK National Awareness Week
London, UK

21 - 24 July
INMM Annual Meeting
Oregon, USA

SEPTEMBER

4 - 6 September
WNA SYMPOSIUM
London, UK

16 - 20 September
IMO CCC 10
London, UK

9 - 11 September
WORLD UTILITIES CONGRESS
Abu Dhabi, UAE

OCTOBER

30 September - 4 October
IMO MEPC 82
London, UK

21 - 25 October
IAEA Small Modular Reactors and their Applications: Ensuring Ensuring the Solutions for Safe, Secure, Safeguardable and Sustainable Energy Supply
Vienna, Austria

NOVEMBER

4 - 8 November
IAEA EPReSC 19th Meeting
Vienna, Austria

8 - 22 November
IAEA TRANSSC 49
Vienna, Austria

25 - 29 November
IAEA CSS – 55th Meeting
Vienna, Austria

DECEMBER

2 - 6 December
IAEA Denial of Shipment Working Group
Vienna, Austria

2 - 6 December
IMO MSC 109
London, UK

3 December
WNTI BOD
London, UK

3 - 5 December
WNTI WINTER SAMM
London, UK

/71

Find out more about events WNTI are involved in by scanning the QR code or visting: www.wnti.co.uk/news-events/events

wnti

WNTI TODAY 2024

CELEBRATING 25 YEARS OF
KEEPING NUCLEAR MOVING

World Nuclear Transport Institute
Labs, Victoria House,
Bloomsbury Square,
London, WC1B 4DA
United Kingdom

Tel: +44 (0)20 7580 1144
Web: www.wnti.co.uk
Email: wnti@wnti.co.uk