

GNS.

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English Edition

THE MAGAZINE OF THE GNS GROUP

Project ONE GNS
The Group Is Becoming One

Sealed for One Million Years
Final Disposal Casks for Crystalline Rock

Teamwork Across Borders
Second Resin Campaign at Sizewell B

Excellence for Nuclear.



Content

- 2 New Production Site in Ratingen
- 3 Editorial
- 4 Continuity Meets the Future
- 5 ONE GNS – The Group is Becoming ONE!
- 6 Team Performance and Innovative Strength
- 8 Brokdorf and Grohnde Fully Defuelled
- 9 A Milestone for the “Concrete Age”
- 10 Two Transports in Six Months
- 11 Sealed for One Million Years
- 12 CASTOR® geo69: A Cask for International Requirements
- 12 First Approval for CASTOR® geo26JP
- 13 Second CASTOR® geo approved for Belgium
- 13 GNS Expands International Services
- 14 MOSAIK® II: Suitability for Konrad Repository Confirmed
- 14 Perfect Timing in Mülheim
- 15 Precision Under Water
- 15 GNS Receives the vgbqe Quality Award 2025
- 16 A Pioneering Project Gains Momentum
- 17 Concreting Marks the Finish
- 18 Applying a Proven Principle
- 19 New Drum Measurement System FAME HDL
- 20 Teamwork Across Borders
- 21 Hands-On Radiation Protection
- 22 Trade Fairs and Events
- 24 Experiencing Technology at GNS
- 25 Fire Safety in Practice – Refreshing Knowledge
- 25 Successful Apprenticeship Graduations 2026
- 26 Three GNS Pioneers Visit Mülheim
- 26 WiN Germany at GNS
- 27 GNS in Motion
- 27 Via Malaysia to Hawaii
- 28 Charity Campaigns by the Essen Apprentices
- 28 Imprint

New Production Site in Ratingen



GPA Managing Directors Daniela Lozinski and Christoph Kohn with their team at the inauguration of the new production site in Ratingen.

Back in December 2024, GNS acquired the Gladbeck-based metallurgy specialist Powder Light Metals and integrated it into the GNS Group as GNS Power Alloys GmbH (GPA). The borated aluminium plates produced by GPA are used, for example, in the baskets of the new CASTOR® geo cask series, which were specifically designed to meet international customer requirements for higher cask capacities – another strategic investment in expanding GNS's in-house value chain.

It soon became clear that the existing facilities in Gladbeck were no longer sufficient. A larger production site had to be found and refurbished to meet GPA's requirements in time for the move at the end-2025. On 20 March 2026, the new production site in Ratingen was officially inaugurated.



An unexpected highlight: a surprise first-aid training session with a realistic ambulance deployment as a shared inauguration experience.



GNS IQ® System – The integrated quiver system for damaged fuel.



Dear Readers,

in the last issue of our GNS Magazine, we looked back on 50 years of GNS to mark our company anniversary – focused from the very beginning on innovation and sustainable solutions for nuclear back-end solutions. While technical and, above all, political framework conditions have changed continuously and sometimes dramatically over the decades, our ambition remains unchanged: **Excellence for Nuclear.**

With exactly this ambition in mind, we launched our ONE GNS project in mid-2025. We are bringing together the previously legally separate companies of the GNS Group into one company – the new GNS. This allows us to offer the long-established and proven capabilities of the nuclear specialists who have come together over the decades even faster, more comprehensively, and with a stronger customer focus – all from a single source.

The most important step has already been completed. At the turn of 2025/2026, we introduced a unified organization for all our employees across all our sites in Germany. It is no longer structured around subsidiaries and sites but is consistently organized into customer-oriented business units supported by cost centers. We already offer our entire portfolio comprising nuclear casks and decommissioning, dismantling, and disposal services through our joint GNS sales organization. For our customers, everything will remain the same – just a little better.

In the coming months, we will prepare the full integration and, ultimately, the merger of our subsidiaries with GNS in the first half of 2027. More details on the process on page 5.

At the same time, we have also refreshed the GNS management board, with the aim of ensuring both progress and continuity.

While we take care of this internal homework, our day-to-day focus remains on our operational business and on delivering for our

customers: fulfilling what was promised, executing projects successfully, ensuring customer satisfaction, and opening up new markets. In Germany, more and more plants have been fully defuelled with the help of our casks. The first of our new CASTOR® geo casks are now being loaded in neighbouring European countries – some of them even by our own service teams. With new CASTOR® cask approvals in Japan and the United States, we are expanding our presence to two additional continents.

We are also making excellent progress in major decommissioning and disposal projects in Germany. From the North Sea coast to the foothills of the Alps, our expertise and technologies are in demand and in daily use. Just as with our casks, decommissioning, dismantling and disposal activities are becoming increasingly international: successful project completions in the UK and sales successes in Switzerland and Italy are just a few examples. You will find more on this in the current issue.

Of course, we continue to closely monitor the dynamic developments in our industry worldwide and look forward to seizing the opportunities they offer for GNS. All of this – and much more that inspires us and makes Team GNS so special – comes together in this issue of the GNS Magazine.

Enjoy the read!

Dr. Jens Schröder
Chairman of the Management Board and CEO of GNS

Management Change at GNS

Continuity Meets the Future

With fresh momentum and familiar faces, GNS's management board has been realigned.



The new GNS management team: Dr. Linus Bettermann, Dr. Jens Schröder and Dr. Martin Meyer ter Vehn.

Effective 1 September 2025, Dr. Jens Schröder assumed the role of Chairman of the Management Board and CEO of GNS Gesellschaft für Nuklear-Service mbH. He succeeds Daniel Oehr, who moved to the management board of PreussenElektra GmbH after five successful years at the helm of GNS.

Dr. Schröder is a familiar face within the company. He has been with GNS since 2006 and has served on the management board since 2011. The mechanical engineering PhD brings extensive experience and deep expertise in the nuclear cask business – the business area for which he will continue to be responsible.

As of 1 July 2025, Dr. Linus Bettermann joined the management board as the new CFO. He took over the corporate and commercial functions from Daniel Oehr and continues to be responsible for sales. Dr. Bettermann has been with GNS since 2011, holding positions in cask development and cask sales. Since 2021, he has served as Vice President Sales and Marketing and as an authorized signatory, and since 2023 as CEO of GNS subsidiary WTI.

The new management team is completed by Dr. Martin Meyer ter Vehn, who has been responsible as COO for the Decommissioning, Dismantling and Disposal business area since September 2024.

Dr. Guido Knott, Chairman of the GNS Supervisory Board, emphasizes the strength of the internal succession:

“With Dr. Jens Schröder and Dr. Linus Bettermann, we are relying on proven leaders who know the company, its markets, and its challenges inside out. This continuity is a key factor for the successful transformation of GNS.”

The new management team stands for both stability and future orientation – a clear signal to employees, partners, and customers: GNS remains on course, is prepared for the next steps in a dynamic market environment and lives its claim of “**Excellence for Nuclear**”.

one GNS

The Group is Becoming **ONE!**



Informing employees during the GNS TownHall.



ONE GNS Summit: developing the new organization.

Since transferring its interim storage activities to the German federal government in 2017, GNS has continued to evolve, and the GNS Group has grown strongly once again with the companies added since then. What once comprised six locations with around 450 employees has since grown into twelve sites with more than 1,000 employees. Today, the GNS Group, lead by GNS Gesellschaft für Nuklear-Service mbH, in Germany comprises the subsidiaries AiNT Aachen Institute for Nuclear Training GmbH, Eisenwerk Bassum GmbH, GNS Power Alloys GmbH, Höfer & Bechtel GmbH, and WTI Wissenschaftlich-Technische Ingenieurberatung GmbH.

To leverage the diverse expertise of these renowned nuclear specialists in Germany and increasingly on an international scale, GNS launched the ONE GNS project in mid-2025. The aim is to merge the previously legally independent subsidiaries into one strong company: the new GNS. It will offer all established services and compe-

tencies from a single source and under one name.

A Unified Organization Since January 2026

The new organization required for this transformation was already established last year. Since January 2026, all employees of GNS itself and of the subsidiaries – which remain as legal entities for just a little while longer – have been working together within one new,



joint organization. It is consistently aligned with customer needs. Within the two business areas NUCLEAR CASKS and DECOMMISSIONING, DISMANTLING & DISPOSAL clearly product- and service-oriented business units serve customers, supported internally by cost centers and corporate functions. The entire product and service portfolio for nuclear casks as well as for decommissioning, dismantling and disposal is already marketed uniformly through the GNS sales organization.

Merger in 2027

Next year, the five GNS subsidiaries will be merged into GNS Gesellschaft für Nuklear-Service mbH. As part of the merger, all employees will transfer to GNS, and all existing supply and service relationships will be assumed by legal succession.

This will complete the ONE GNS objective: offering all capabilities, competencies, products, and services with even greater customer focus – from a single source.

Team Performance and Innovative Strength

On 26 June 2025, the lobby of GNS in Essen again became the setting for a special event: the ceremonial presentation of the GNS Excellence Awards. Established in 2023, the awards recognize outstanding team achievements that drive the development of the entire GNS Group. Once again, the nominated projects impressively demonstrated the innovation, customer focus and operational excellence embodied within GNS teams.



Opening of the GNS Excellence Awards 2025 by Daniel Oehr.



As in previous years, the awards were presented in four categories: Excellence in Innovation, Excellence in Customer Orientation & Sales, Excellence in Project Performance and Excellence in Operations & Digital Transformation. In 2025, the last category was expanded to include digital transformation, reflecting the growing importance of modern technologies in everyday business.

A Transparent Selection Process – From Idea to Award

The award selection follows a clearly structured and transparent process. All employees were invited to submit projects from 2024. From all submissions, the jury drew up shortlists of five project teams per category. The nominated teams then submitted written applications, which formed the basis for the

jury's final decision on the winners. As always, a raffle awaited all nominees alongside the awards ceremony.

A Strong Signal for the Entire GNS Group

Once again, the awards highlighted how strongly GNS teams live by technical excellence, a spirit of innovation and a culture of collaborative partnership. For the first time in 2025, projects from subsidiaries were also included – an important step towards further strengthening collaboration and team spirit across the GNS Group.

This year's winners – as well as all nominees – stand as representatives of GNS's commitment to working every day on solutions that continue to advance the safety, efficiency and long-term sustainability of nuclear waste management.

Award Winners 2025

Excellence in Innovation: ReaDi KKG Concept

In this category, the ReaDi KKG concept impressed the jury most. The project prevailed against strong competitors, including CASTOR® geo69, the concept for final disposal casks for high-level waste, and RoCS – robotic concrete placement.



Excellence in Innovation: Dr. Sascha Klappert (jury), Joachim Ochs, Denis Gotic and Sebastian Knodt (jury).

Excellence in Customer Orientation & Sales: Storage Design Kepco E&C (Korea)

For outstanding customer focus, the Kepco E&C (Korea) storage design project received the award in this category. Other nominated projects ranged from core scrap disposal in Germany to equipment supplied to international customers.



Excellence in Customer Orientation & Sales: Arndt Steinhäuser, Alexander Tönnies, Dr. Rainer Nöring (jury), Dr. André Leber, Dr. Luc Schlömer and Andreas Kleemann.

Excellence in Project Performance: MOSAIK® II-15 ABK II sf

In this category, MOSAIK® II-15 ABK II sf emerged as the winner – a project that demonstrates how consistently GNS combines quality, efficiency and adherence to schedules (see also p. 14). Other nominees included the transport and storage license for CASTOR® geo69 in the USA and the increase in Konrad container production.



Excellence in Project Performance: Thomas Eichhorn (jury), Bettina Partes, Dr. André Leber, Daniel Ackerschott, Dr. Luc Schlömer and Daniela Lozinski (jury).

Excellence in Operations & Digital Transformation: Implementation of SIVAS ERP at EWB

The award in this expanded category went to the Implementation of SIVAS ERP at EWB project. With this decision, the jury recognised a contribution that not only modernises operational processes but also strengthens a key factor of digital transformation. Other nominees included the CASTOR® Digital Twin and the newly developed PIK AS operations documentation module.



Excellence in Operations: Dr. Jan Leilich (jury), Christina Wellhausen, Yanik Wagner-Bischoff, Yvonne Staisch, Daniel Schlick, Andreas Kiep, Melanie Flemming and Anika Förthmann.

Last CASTOR® Loadings

Brokdorf and Grohnde Fully Defuelled

In spring 2026, the two PreussenElektra plants in Brokdorf and Grohnde reached an important milestone on their path toward decommissioning with the loading of their final CASTOR® casks.

With the dispatch of the last CASTOR® V/19 cask and its subsequent transfer to the Brokdorf interim storage facility on 12 February 2026, the Brokdorf nuclear power plant is now officially fuel-free. The final phase was both technically and organizationally demanding.

Loading operations had already been underway at full pace since 2023. The GNS team dispatched 41 CASTOR® V/19 casks with a total of 764 fuel assemblies as well as six GNS quivers for special fuel rods. For the first time, a mixed loading configuration was used, combining both fuel assemblies and quivers within a single cask.

In April, the same milestone was reached at Grohnde NPP. After a total of 694 fuel assemblies had been loaded into 75 CASTOR® V/19 casks since 2023, the final cask was removed from the reactor building and transferred to the Grohnde interim storage facility on 7 April 2026.



The final CASTOR® V/19 cask at Grohnde. Photo: PreussenElektra GmbH.



The final CASTOR® V/19 cask at Brokdorf.
Photo: PreussenElektra GmbH.

With the fuel assemblies and rods the largest share of radioactivity has now been removed from both plants, since spent fuel accounts for more than 99 per cent of the radioactive inventory.

However, the removal of all spent fuel at both sites represents far more than a technical success. It demonstrates the close integration and effective cooperation within GNS and with its customers. Ingmar Koischwitz, Vice President Cask Services, explains: "The provision and processing of extensive fuel assembly and special fuel rod data, tens of thousands of pages of inventory documentation for the supervisory authorities, and the precise conditioning of special fuel rods are exemplary of our high standards for quality, safety and efficiency."

GNS Awarded Second Major Decommissioning Contract in Switzerland

A Milestone for the “Concrete Age”



Contract signing: Philipp Sommerer (Reinwald), Dr. Martin Meyer ter Vehn and Dr. Linus Bettermann (GNS), Ingo Ossenbühl (BuM), Stefan Klute (BKW).



After winning the contract for the dismantling of the reactor pressure vessel (RPV) of the Swiss nuclear power plant Mühleberg in 2024, GNS has now secured another major decommissioning project at the site.

The operator BKW awarded the contract to a consortium led by GNS, together with partners Reinwald and Beton- und Monierbau Herten (BuM). Decisive factors were the strong reference from dismantling the biological shield at Grafenheinfeld NPP and an innovative technical concept. The project comprises planning and execution of the dismantling and packaging of the drywell liner, the biological shield, the RPV pedestal, and additional concrete structures located beneath it. In total, around 1,700 tonnes of concrete and steel structures will be

dismantled. GNS leads the consortium and is responsible for interface and packaging planning as well as dismantling the steel platforms in the drywell. The partner companies carry out the concrete work and dismantling of the liner.

Planning work began immediately after contract award to ensure all approvals are in place for dismantling to commence in summer 2027. The dismantling phase is scheduled to last twelve months.



Test field for milling trials on a concrete wall using the newly developed milling method.

Return of Reprocessing Waste

Two Transports in **Six Months**

With the return of CASTOR® casks from France and the United Kingdom to the German interim storage facilities at Philippsburg and Isar, GNS successfully implemented logistically and security-critical processes efficiently and smoothly together with industrial partners and authorities.



From ship to rail: transshipment of CASTOR® HAW28M casks in Nordenham.

The German nuclear power plant operators are contractually obliged to take back reprocessing waste from abroad. They have appointed GNS Gesellschaft für Nuklear-Service mbH as the central service provider for managing the return transports.

A German federal government's 2015 concept provides for German waste from reprocessing in the UK to be distributed to the federal interim storage facilities in Biblis (Hesse), Isar (Bavaria), and Brokdorf (Schleswig Holstein), while the remaining German waste from France is to be stored at the federal interim storage facility in Philippsburg (Baden Württemberg). The transport to Biblis took place already in 2020 (see also GNS Magazine 13).

France: Last Transport to Philippsburg

On 20 November 2024, a train carrying four CASTOR® HAW28M casks arrived in Philippsburg. The casks came from the La Hague reprocessing plant in France and contained the last remaining radioactive waste from reprocessing German spent fuel. The transport proceeded without incident.

The casks were handed over to BGZ Gesellschaft für Zwischenlagerung mbH and placed in storage at the federal interim storage facility in Philippsburg. With this step, Germany has fully met its international obligations to take back all reprocessing waste from France.

The transport began on 26 March with the departure of the vessel Pacific Grebe in the UK and continued via the port of Nordenham to Isar – without incidents or significant protests.

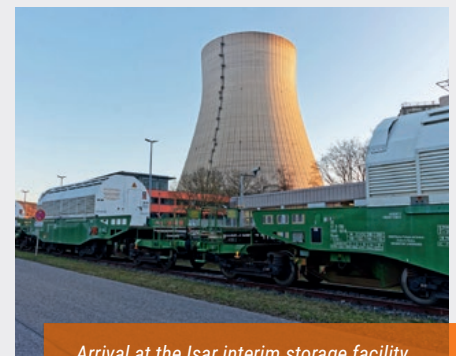
The final transport from Sellafield, and thus the last return shipment to Germany, is planned for 2026 to the federal interim storage facility at Brokdorf.



Unloading a CASTOR® HAW28M cask at the Philippsburg interim storage facility.

England: From Sellafield to Isar

On 3 April 2025, seven CASTOR® HAW28M casks arrived by rail at the Isar federal interim storage facility. The casks contain waste from reprocessing German spent fuel at Sellafield in the UK.



Arrival at the Isar interim storage facility.

ELBRock – Final Disposal Casks for Crystalline Host Rock

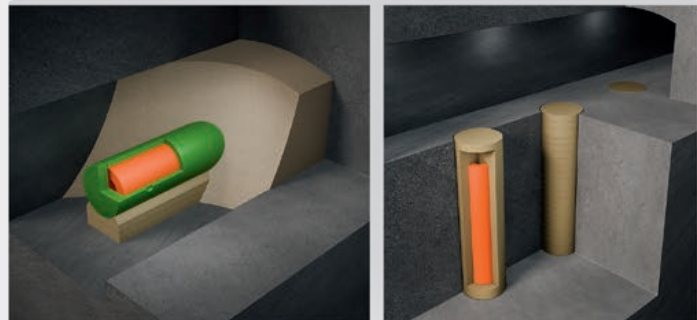
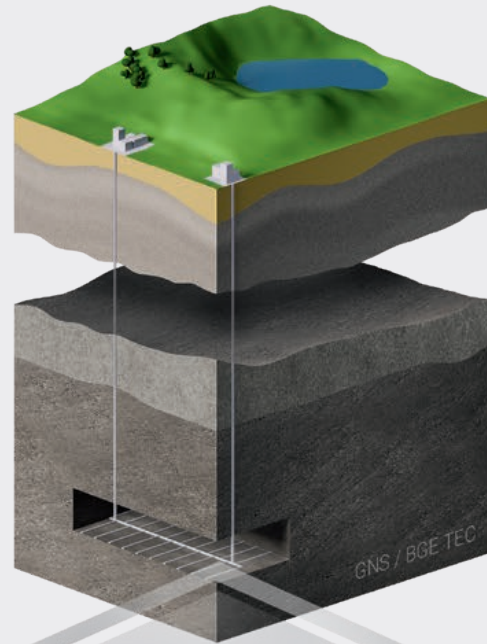
Sealed for One Million Years

With the final handover of the approximately 1,300 page results documentation to the Federal Company for Radioactive Waste Disposal (BGE) in December 2025, one of the most demanding development projects of recent years was successfully completed.

As part of the ELBRock project, a consortium of GNS and BGE TECHNOLOGY GmbH (BGE TEC) developed three cask concepts for the safe disposal of high-level and heat-generating radioactive waste in crystalline rock. Alongside clay and rock salt, crystalline rock is one of the three host rock types under consideration for a final repository in Germany.

While BGE TEC contributed geological expertise, GNS was responsible for overall cask development and applied its decades-long experience in inventory and cask design.

The requirements for the new final disposal casks are exceptional: leak-tightness over a geological time span of one million years and interaction with the swelling backfill material bentonite form the basis of a robust safety concept. In addition to the technical challenges, the project also required transparent documentation that could be understood by the public. This made the safety assessment particularly demanding and highlights the project's importance for Germany's future disposal strategy.



ELBRock project – 3D visualization.

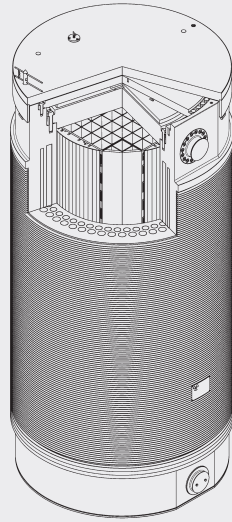
Innovative Cask Technology

CASTOR® geo69: A Cask for International Requirements

With the CASTOR® geo69, GNS presents a solution specifically designed for nuclear power plants with limited crane capacities, enabling safe and cost-efficient disposal of spent fuel. The new cask system combines the proven ductile cast iron technology of the CASTOR® family with a patented, re-closable canister concept.

A major milestone was achieved with approval by the U.S. Nuclear Regulatory Commission (NRC) under 10 CFR 71 in November 2024. This makes the CASTOR® geo69 the first ductile cast iron cask for spent fuel from commercial reactors to receive this approval. Approval under 10 CFR 72 for interim storage has also been applied for.

The CASTOR® geo69 can accommodate up to 69 boiling water reactor (BWR) fuel assemblies or 37 pressurized water reactor (PWR) fuel assemblies and uses a robust, stress-corrosion-resistant cast material. Fuel assemblies are first inserted into stainless-steel canisters inside the reactor



pool and later loaded into the ductile cast iron cask outside the reactor building – similar to internationally common concrete cask systems, but offering significantly enhanced safety due to the material used.

Particularly noteworthy are the technical features that, by design, enable the cask to be used across a wide range of applications at nuclear power plants at an international level:

- A canister with basket acting as an inner containment
- A retention ring in the cask body to secure the canister
- A basket made of borated aluminium with load-bearing function
- PU foam as filling material for the impact limiters

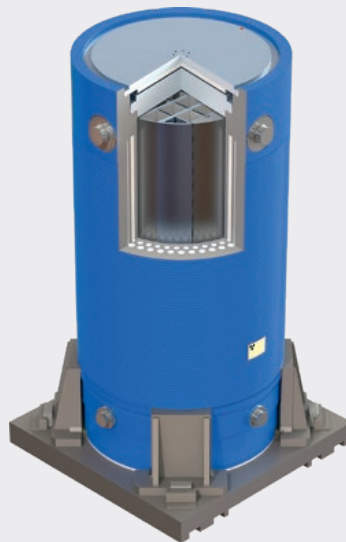
These innovations were validated through extensive testing, including a drop test with a mock-up and multiple assembly trials at GNS.

First Approval for CASTOR® geo26JP

In December 2025, GNS achieved a major breakthrough: CASTOR® geo26JP received its first approval for the Japanese market – the result of many years of dedicated work by numerous colleagues.

Initial sales contacts in Japan began in 2016, with early interest from potential customers, partners, and the regulatory authority NRA in a CASTOR® cask especially customized for Japanese requirements. Official development started in April 2019.

The challenges were significant: a new derivative of the CASTOR® geo family had to be developed for Japanese PWR fuel assemblies, while meeting strict Japanese licensing and documentation requirements that differ substantially from European regulations.



GNS submitted the license application in March 2021, followed by an intensive review process in close coordination with the authorities. To support activities in Japan, GNS established its subsidiary GNS Japan K.K. in Tokyo in January 2021.

The first approval confirms the safety design of the CASTOR® geo26JP in accordance with Japanese requirements. Building on this, GNS is currently pursuing an additional approval to formally recognize the design under IAEA transport regulations.

CASTOR® geo21B

Second CASTOR® geo approved for Belgium

The initial approval of the new CASTOR® geo21B by the Belgian nuclear regulatory authority FANC on 9 September 2025 marks another important step for the safe disposal of spent fuel assemblies from the Belgian nuclear power plants Tihange 3 and Doel 4.

GNS submitted the application for approval as early as 2019. However, due to the assessment of other cask designs – most notably the CASTOR® geo24B – the actual review process did not begin until 2023. Experience gained during the licensing procedure for the CASTOR® geo24B proved highly valuable: many methodological issues had already been clarified in advance, resulting in fewer regulatory comments in the current approval process.

With the approval now granted and the interim storage licence expected in 2026, disposal activities for 17 × 17 fuel assemblies from the plants can be pursued in a targeted manner. The twelve CASTOR® geo21B casks ordered to date are primarily intended for Doel 4, with the first cask already delivered. In October 2025, cold trials at the Doel site were carried out successfully.



Cask Services in Belgium

GNS Expands International Services

By signing a cask services contract with Belgian ENGIE for the Doel nuclear power plant, GNS has reached another important milestone on its path toward internationalising its service portfolio.

The contract covers operational support during spent fuel cask loading campaigns. GNS provides highly qualified and experienced personnel who make a significant contribution on site to the safe, efficient, and on-schedule execution of the campaigns. The scope of services covers the entire cask dispatching

process, including support with cask handling, drainage, drying, residual moisture measurements, and visual and leak-tightness inspections.

A particular milestone of this contract is GNS's first direct involvement in fuel handling and cask loading. Various cask types are used, including CASTOR® geo casks. Since May 2025, GNS teams have been active on site, supporting the loading and dispatching of CASTOR® geo24B casks. The contract has an initial term of five years.

Certificates for Final Disposal

MOSAIK® II: Suitability for Konrad Repository Confirmed

With the issuance of the two certificates BGE/GNS/01/2021 on 10 July 2024 and BGE/GNS/01/2018 on 26 March 2025, a major milestone has been reached for GNS's customers' decommissioning projects. The MOSAIK® II casks, including variants II-15 EI and II-15 U EI, now officially meet the demanding requirements of the German repository Konrad for LLW and ILW for the full spectrum of dry, solid, and solidified radioactive operational and decommissioning waste.

Extensive review process

Behind these approvals lies a multi-year design verification process involving nearly 20 experimental tests, including drop tests, one-hour fire tests at 800 °C, and extensive leak-tightness verification.

One of the most challenging aspects was the extreme thermal load on the seal during accident scenarios. This was addressed by

developing a special thermal protection hood made of stainless steel with a high-performance coating, validated in fire tests with representative inventories.

Transfer to Federal Interim Storage

The certificates enable the subsequent acceptance of already manufactured casks, creating the basis for their transfer to BGZ Gesellschaft für Zwischenlagerung mbH.



Drop tests as part of the design approval process using the MOSAIK® II cask.

Perfect Timing in Mülheim



On the second-to-last working day of 2024, spirits were high at the Mülheim production site. The seven-member MOSAIK® team not only met its ambitious annual target – it exceeded it. The 400th cask was fully assembled on 19 December 2024, while cask number 401 was already nearing completion.

Within a single year, five different MOSAIK® designs were manufactured in Mülheim, including 78 IP 2 casks and 323 of the more complex B(U) type. The 400th cask, a B(U) design, was delivered to Isar nuclear power plant after transport approval.

“The jump from around 150 containers in 2019 to 400 in 2024 was extreme and posed considerable challenges for us,” reports Marie Borowycz, group leader of MOSAIK® production. “But we mastered them together.”

An early Christmas present: the 400th MOSAIK® cask of the 2024 annual production was completed on 19 December.

Pre-Segmentation of Control Rods at KKE

Precision under Water

At the Emsland nuclear power plant (KKE), extensive preparatory work was required prior to CASTOR® loading operations. This involved the pre-segmentation of 58 control rods stored in the spent fuel pool. A GNS team supported the plant on site over several weeks.

For the underwater transport of the control rods a dedicated grapple was used in combination with an empty fuel element structure serving as a precisely fitting quiver, enabling accurate handling of the components. The control rods were segmented while positioned inside the fuel element structure, which was placed in the transfer station and raised to just below the water surface.

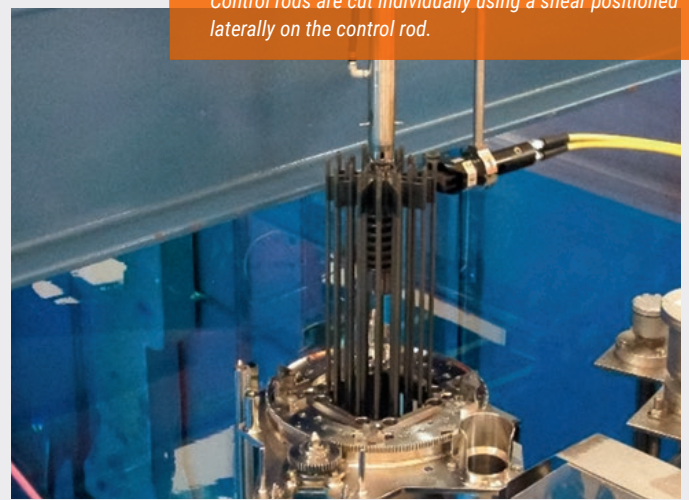
Following clearance by radiation protection, the upper sections of the control rods were lifted out of the water. The 24 control rods were then separated from the control rod heads using a hydraulic shear. The control rod heads were decontaminated and packaged in 200-litre drums.

After separation, the approximately four-metre-long control rods were returned underwater to the storage rack using the fuel element structure. The individual rods were then transferred from the fuel element structure to designated positions in twelve wet storage shafts, where they will remain until a campaign planned

for 2028, during which their final dismantling and packaging are scheduled.

The work was carried out according to plan, despite parallel decommissioning activities at the power plant, including preparations for dismantling the reactor pressure vessel head.

Control rods are cut individually using a shear positioned laterally on the control rod.



Nominated by the Customer

GNS Receives the vgbe Quality Award 2025

The ReaDi project team, consisting of GNS and subsidiary Höfer & Bechtel, received the vgbe Quality Award 2025 for dismantling the reactor pressure vessel at Grafenrheinfeld

nuclear power plant (KKG). The jury recognized a technical innovation that sets new industry benchmarks and was developed directly from experience gained during the pilot project at Unterweser (KKU). The project was nominated by the customer PreussenElektra, the operator of both KKG and KKU.

From Challenge to Benchmark

Challenges including material stresses and slow cutting processes were systematically addressed in Grafenrheinfeld through a revised concept featuring a second large band saw, optimized cutting plans, and newly developed special components. As a result, dismantling time for the flange ring was reduced from nine weeks to just three days.



Presentation of the vgbe Quality Award 2025: Dr. Georg Stamatelopoulos (vgbe), Tuncay Ertugrul (GNS), Denis Gotic (Höfer & Bechtel), Dr. Oliver Then (vgbe). Photo: vgbe energy e. V.

ReaDi KKI-1 – From Planning to Success

A Pioneering Project Gains Momentum



After some 18 months of intensive planning and preparation, the ReaDi team began dismantling and packaging the first boiling water reactor pressure vessel (RPV) as part of the ReaDi project at the Isar Nuclear Power Plant (KKI-1) in May 2024.

Key milestones in the dismantling process

- July 2024: Start of pre-segmentation of the RPV into nine ring segments. Two of these were cut into special-size units and handed over to KKI for clearance, while the remaining seven were placed in interim storage. Despite some interruptions the work was completed on schedule.
- December 2024: The final ring segment was removed, completing the pre-segmentation work.
- January 2025: The calotte of the boiling water reactor – a central component weighing around 126 tonnes – was lifted using a custom-designed heavy-load lifting beam and placed on the dismantling table.
- August 2025: The final cut was made on the remains of the reactor pressure vessel, completing its dismantling. The final cut segments were packaged, handed over to KKI, and the controlled area was cleared.

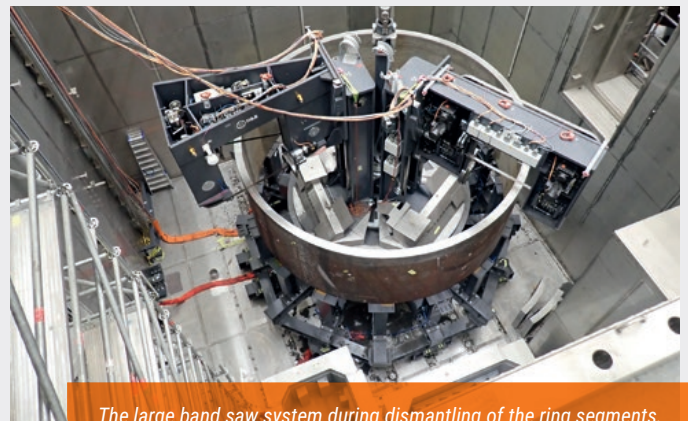
Drying High Dose Rate Waste

In parallel with the dismantling of the RPV, another demanding project was successfully completed: the drying of a total of 42 drums containing high-dose and mixed waste using GNS's KETRA drying facility. By integrating a CO detector, a temporary extension of the handling licence was obtained.

No Break for the Saw

With the completion of its third reactor pressure vessel dismantling project within the PreussenElektra fleet, GNS has now reached the halfway point of its decommissioning projects. Immediately following the work at KKI-1, the large band saw was put back into operation at Unit B of the Biblis nuclear power plant, operated by RWE.

Here, the RPV head was dismantled in line with the approach used in the ReaDi KKG project. Starting with the removal of the drive coils in July 2025, the project ran in parallel with the dismantling of the internal structures and demonstrated the full flexibility of the



The large band saw system during dismantling of the ring segments.

H&B team from Mainhausen. The cut sections were subsequently sent for melting rather than being placed in interim storage. The final wire-saw cut was completed in early December 2025, and just two weeks later, work with the large band saw was also finished.

Next Stop: Grohnde

Only recently, the final fuel assemblies at the Grohnde nuclear power plant were loaded into CASTOR® casks, officially achieving fuel-free status (see p. 9). Now, decommissioning activities can truly get underway: with the transition into the planning phase for the Grohnde plant, the ReaDi project will be continued and further developed from 2027 onwards.



The team after the successful lifting of the reactor pressure vessel head.

Two Campaigns Completed

Concreting marks the Finish



Containers in the concreting line.

With the concreting and handover of the final steel sheet container at the Grafenrheinfeld nuclear power plant (KKG), another major milestone was completed in the ZerKon campaign for dismantling and packaging the reactor pressure vessel and core internals. Since the start of the campaign in mid-October 2024, a total of 76 steel sheet containers (SCs) – 18 of Type IV and 58 of Type II – have been filled with normal-weight or lightweight concrete and conditioned in compliance with final disposal requirements.

The work was carried out both on the established concreting line within the controlled area and in a dedicated concreting hall built by KKG specifically to GNS specifications, featuring GNS silos in the outdoor area. This setup enabled flexible and efficient execution. The concreting line accommodates six Type II SCs or three Type IV containers and is equipped with circumferential shielding to ensure safe and uninterrupted operation.

A Pilot Project Under Demanding Conditions

During this phase, KKG served as a genuine pilot project. Still, all challenges from personnel planning and supply chains to product quality were successfully mastered. Close cooperation between GNS, KKG, and BGZ Gesellschaft für Zwischenlagerung mbH proved to be a key success factor.

Although the concrete pouring has been completed, the overall project is not yet finished. Final coordination of the project documentation is currently underway.

Second ZerKon Campaign Completed at KKI-1

Following the campaign at KKG, the next ZerKon campaign began at Isar nuclear power plant (KKI-1) in October 2025 with installation and commissioning activities. The final container was filled in March 2026. In total, 71 steel sheet containers were concreted – 66 of Type II and 5 of Type of IV.



Filling a container with concrete.

Applying a Proven Principle



Lifting the reactor pressure vessel flange ring.

With the dismantling of the reactor pressure vessel (RPV) head at the Biblis nuclear power plant, GNS once again demonstrated how well-coordinated processes, technical expertise, and a spirit of partnership lead to fast and safe results. The massive head – weighing around 95 tonnes and measuring nearly six metres in diameter – posed significant technical challenges, while at the same time providing ideal conditions for successfully repeating a proven strategy.

After the large band saw system had already been used at Grafenrheinfeld (see also GNS Magazine 14), it was deployed again at Biblis. In the first project phase alone, 61 chimneys, instrumentation tubes, and control rod drives were removed within just two months and transferred to buffer storage.

The key phase followed in September 2025 with mobilization for dismantling the RPV head. Unlike earlier projects, the head was not segmented into Konrad containers. Instead, larger segments were produced and routed to melting as the disposal path. A total of nine IP-2 sea containers were loaded with the segments.

Dismantling was completed before Christmas 2025. Just six weeks later, the fully cleared work area was handed back to the customer. Close cooperation between the on-site RWE team and the teams from GNS and Höfer & Bechtel proved decisive to the project's success.



Loading the container for melting.



Work area with turntable (rear), wire saw unit (left), and band saw module (right).

Progress in Measurement Technology

New Drum Measurement System **FAME HDL**

GNS subsidiary AiNT has taken a significant step towards automated and high-precision measurement technology with the development of the new FAME HDL drum measurement system. The system was developed for of PreussenElektra and realised through close technical cooperation with Mirion Technologies (Canberra) GmbH. The development objective was a safe, precise and highly automated characterisation of high-dose radioactive waste – mobile, modular, and for the first time qualified independently of site and campaign.

High Degree of Automation for Reliable Results

The drum measurement system features a high level of automation and combines several measurement methods within a flexible system:

- Drum weighing to determine the total weight
- Dose rate measurement to assess radiation intensity
- Nuclide-specific gamma spectrometry to identify and quantify Co-60 and Cs-137 in 170-liter and 200-liter drums

For gamma-spectrometric investigations, the system uses Integral Gamma Scanning (IGS), which in this dose-rate range is currently unique in terms of mobile availability. An adjustable collimator and polyethylene prisms that can be inserted into the radiation path – together with a mathematical efficiency calibration developed by AiNT – enable a reduction of apparent activities in activity determination.



The weighing unit integrated into the turntable enables determination of the drum weight.



Test setup of the new FAME HDL system. The system can be installed on a footprint of approximately 19 m².

Operation is fully remote-controlled over cable lengths of up to 60 meters, allowing personnel to remain safely outside radiation areas. This enables safe characterization of drums with contact dose rates of up to approximately 1.5 Sv/h. Measurement, evaluation, and documentation are largely automated.

Flexible, Mobile, and Adaptable

Another key advantage of FAME HDL is its modular, mobile design. The system can be installed on an area of approximately 5.6 × 3.3 meters and adapted to different spatial conditions – an important benefit for decommissioning projects with limited space.

FAME HDL is currently in use at Grafenrheinfeld, where initial measurements have already been completed successfully.

Second ILW Resin Campaign Completed at Sizewell B

Teamwork Across Borders

GNS had previously carried out a resin campaign at Sizewell B back in 2013/2014, filling and drying 55 MOSAIK® casks using its mobile FAFNIR and NEWA systems. With the successful completion of the second campaign in 2025, GNS has once again demonstrated its long-term reliability in the UK – and more projects are set to follow.



Twelve years after the first resin campaign, back in operation again during the 2025 campaign: Richard Teager (left) from the Sizewell B operations team at the control panel of the resin transfer system, and Matthias Sauer (right) from GNS at the FAFNIR control unit.



Planning for the project began in 2024, shaped by numerous country-specific conditions. New Brexit regulations, complex work permit procedures, and logistics for the challenging installation location in the Radwaste Building placed high demands on the project management. Despite these challenges, GNS successfully transported and installed the FAFNIR V and NEWA II systems in England in May 2025, marking the first major milestone.

The operational phase began in September 2025. A total of 24 MOSAIK® II-15 IP-2 casks were filled with approximately 8 to 9 m³ of ILW ion-exchange resins.

“The working conditions differed significantly from those at German plants and required a high degree of coordination as well as technical and cultural adaptability,” explains Marco Reitzig, Project Manager Decommissioning & Disman-

ting Global Projects. “Despite some technical incidents and organizational specifics at Sizewell B, the campaign was completed on schedule and to the full satisfaction of the customer.”

Even at this early stage, the next resin disposal campaign is already on the horizon – scheduled for around eight years from now.

First GNS Radiation Protection Day

Hands-On Radiation Protection



Opportunity to try on respiratory protection masks against incorporation of radioactive substances.



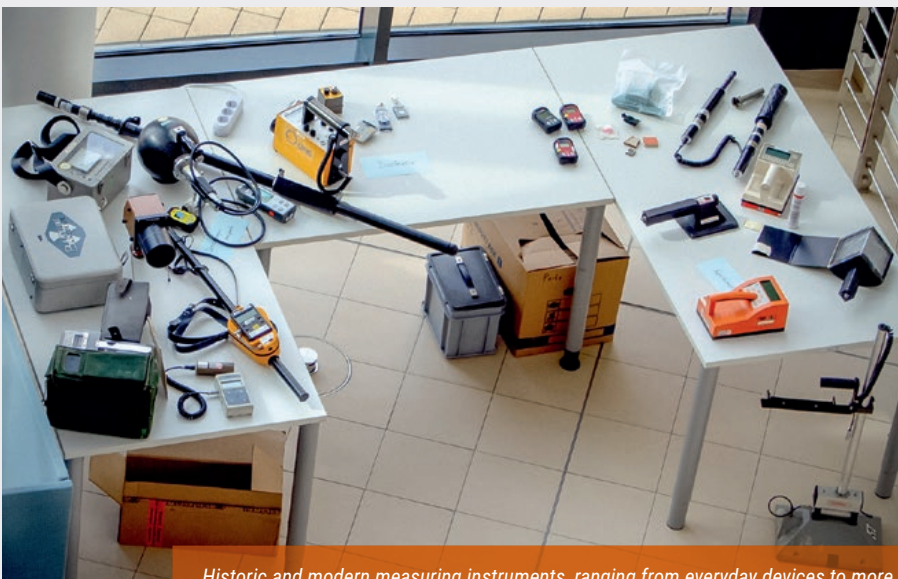
Dr. Martin Meyer ter Vehn inside the "controlled area".

For many GNS employees, working with radioactive materials and ionizing radiation is part of everyday professional life. Radiation protection measures and rules are constant companions, ensuring personal safety and smooth operations.

To give more colleagues the opportunity to experience radiation protection measures in practice and to deepen their understanding of related workflows and cooperation, the first GNS Radiation Protection Day took place on 24 March 2026 at the Essen headquarters.

Organized by Ulla Ham, GNS Radiation Protection Officer, the event offered employees a hands-on introduction to radiation protection. On the exhibition area, participants could examine historic and modern measuring devices and measure various objects themselves. A license-free "controlled area" allowed realistic entry and exit procedures and included a small measurement task.

The program was complemented by two specialist presentations: Niemma Buckanie explained the basics of radiation biology, while Hagen Höfer and Christoph Kelm provided insights into practical radiation protection.



Historic and modern measuring instruments, ranging from everyday devices to more unusual equipment, available for hands-on exploration.

Trade Fairs and Events

The GNS booth at **KONTEC** in Dresden is traditionally among the most frequented of the conference. Several GNS presentations were also part of the program, including "Implementation of the "Rip & Ship" Strategy at Unterweser NPP", ZerKon – Dismantling and Packaging of six RPV-I of the PreussenElektra Fleet – Half-time Report", "Dismantling of the Biological Shield at KKG Using the Milling Method – Focus on Radiological Planning", "Mobile Concreting of Containers for Waste Packages Suitable for Final

KONTEC 2025



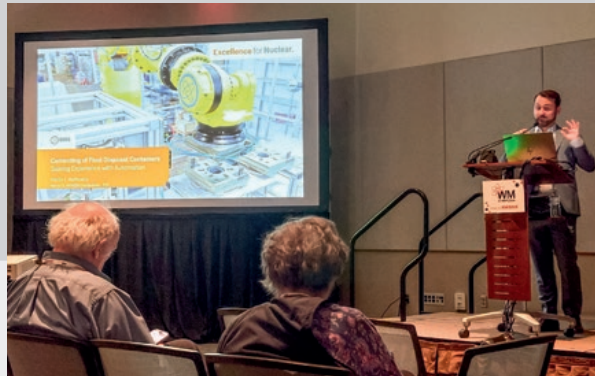
Disposal", "Dismantling of Reactor Pressure Vessels using Cold-Cutting Technology", and "GNS T-Box – Development, Testing for Licensing, Prototyping and Planning of Mass Production of a High-Performance Packaging Solution for Storage and Transport".



Together with SafeTec, GNS presented itself with a booth at **WNE** in Paris, France.



At this year's **Waste Management Symposia** in Phoenix, USA, GNS was represented for the second time with its own booth. Presentations included contributions by Dr. Linus Bettermann (Challenges in Addressing the Management of Spent Nuclear Fuel from Non-Water-Cooled SMRs) and Martin Hoffmann (Nuclear Operating Experience and the Future State-of-the-Art of Grout and Cement).



Also in the USA, GNS participated in PATRAM in San Antonio, where several technical topics were presented, including "GNS T-Box – Development, Prototyping and Testing to License a High-Capacity Decommissioning Solution for Storage and Transport", "Behaviour of a Wooden Shock Absorber under Full-Scale ACT Fire Conditions", and "Nuclear Cask Services – Complete Defueling at Philippsburg NPP and First Loading at Doel NPP".

PATRAM 25



Aoki-Award 2025 for GNS

For more than two decades, GNS has been a permanent and active member of the PATRAM community, shaping the international conference on packaging and transport of radioactive materials far beyond its own technical contributions. In recognition of these efforts, GNS was honoured with the prestigious Aoki Award at PATRAM 2025 in San Antonio.

The Aoki Award recognizes exceptional contributions to safety in the packaging and transport of radioactive materials.



Girls' Day 2026

Experiencing Technology at GNS



In 2026, several GNS sites once again opened their doors for the nationwide Girls' Day / Future Day initiative. As in previous years, this included the GNS headquarters in Essen together with the Cask Manufacturing Center in Mülheim an der Ruhr, as well as the two major production sites in Bassum and Sulingen. For the first time, the newly inaugurated Ratingen (see p. 2) production site also took part – just one month after its official opening.

Nearly 30 pupils, mainly girls but also a few boys, took the opportunity to explore the world of technical professions for a day.



Girls' Day participants guided through cask fabrication in Mülheim by Marie Borowycz (left) and Daniela Lozinski (right).



In Essen, Annika Thiel introduced the young visitors to the basics of technical product design.



The focus varied by site:

- Essen/Mülheim an der Ruhr: Technical product design, an easy-to-understand introduction to radiation protection, and a tour of the Cask Manufacturing Center in Mülheim
- Bassum and Sulingen: Facility tours offering practical insights into technology, as well as personal perspectives from current apprentices about their training and professions
- Ratingen: Insights into the new production facility and laboratory work

Despite the different locations and programs, all participants gained a strong impression of how diverse technical careers can be – from development and practical implementation to safety and responsibility in daily work.



Exciting insights into modern metalworking and cask fabrication for girls and boys in Bassum and Sulingen.



Fire Safety Action Day at GNS

Fire Safety in Practice – Refreshing Knowledge

“Experiencing fire safety” in a very practical way: the first Fire Safety Action Day at the Essen headquarters gave GNS employees the opportunity to engage intensively with fire prevention and fire-fighting.

In small groups, participants moved through both theory and practice. The theoretical session covered basic fire risks in the workplace, safe handling of ignition sources, and correct behaviour in an emergency. This was followed by a hands-on firefighting exercise in the parking area, where participants practiced extinguishing a controlled fire using fire extinguishers under professional guidance – training for real life situations.



During the Fire Safety Action Day, participants learned to keep a cool head – even when things got hot.

Successful Apprenticeship Graduations 2026



Justin Weber, Dominik Fiege and Dario Adam are excited about their successful graduations.



Ergün Demirbas joined the Drums Workshop team in Sulingen.

Once again, GNS celebrates successful apprenticeship graduations at its Essen and Sulingen sites. Four young colleagues reached an important milestone and are now starting the next chapter of their careers within the GNS Group.

Justin Weber and Dario Adam successfully completed their training as industrial clerks. Justin has joined the Payroll team, while Dario is starting his career in Controlling.

Dominik Fiege, trained as an office management clerk, now supports the Management Systems & HSRE team.

Ergün Demirbas completed his apprenticeship as a construction mechanic in Sulingen and has joined the Drums Workshop team.

With more than 30 apprentices and dual students currently training at GNS facilities, education – from commercial roles and IT to metalworking, mechanics, and dual study programs – remains a core element of GNS's people strategy.

Three GNS Pioneers Visit Mülheim

Three former senior executives visited GNS's Cask Manufacturing Center in Mülheim on 24 March 2026. Dr. Klaus Janberg (84) was Managing Director of GNS from 1980 to 2001 and is one of the founding fathers of the CASTOR® cask, Dr. Peter Munz (81) worked for GNS from 1977 to 2005, in his last position as Managing Director of the then GNS owned central interim storage facility at Ahaus, and Mohammed Reza Ebrahimzadeh (91), who was with GNS from 1981 to 2001 as long-standing Head of Production.

The veterans were welcomed and escorted through the facilities by, so to speak, their "second generation successors" Dr. Jens Schröder, CEO, Daniela Lozinski, Vice President Supply Chain & Cask Fabrication, and Michael Köbl, Head of Communication & Marketing. The visit was marked by stories from the past, the tour of today's operations, and insights into the future of the company and its products.

"We were deeply impressed by the stories and experiences shared by the three senior colleagues. Conversely, our guests seemed equally impressed by what has become of their CASTOR® and their GNS – and by what still lies ahead," recalls Dr. Jens Schröder, reflecting on the joint tour. "The professional achievements and



GNS veterans meet their successors in the Cask Manufacturing Center in Mülheim. From left to right: Dr. Klaus Janberg, Mohammed Reza Ebrahimzadeh, Daniela Lozinski, Dr. Peter Munz, Dr. Jens Schröder.

innovations of these three colleagues laid a crucial foundation for what GNS is today and for our leading market position as a nuclear waste management company in Europe. It was a moving and unforgettable afternoon for all of us. We sincerely thank them for their visit and wish them all the best in the years ahead."

WiN Germany at GNS

As host of the 2025 Women in Nuclear (WiN) Germany annual general meeting, GNS welcomed female nuclear professionals to its sites in Essen and Mülheim. The two day event offered not only opportunities for exchange and networking, but also direct insight into GNS technology and its responsibility in nuclear waste management.

Technology You Can Experience – Visit to the Cask Manufacturing Center

A special highlight was the guided tour of the MOSAIK® and CASTOR® Cask Manufacturing Center at the Mülheim an der Ruhr site. Participants experienced first hand how precision, technological advancement, and decades of experience come together in the production of transport and storage casks.



WiN Germany 2025: Visit to the Cask Manufacturing Center in Mülheim.

Active, Dedicated, Together

GNS in Motion

Whether rain, headwinds, or close competitions – GNS employees once again demonstrated strong team spirit and enthusiasm through their sporting activities.

Kubb (Viking Chess)

From March to November, 24 participants competed in 12 teams in the annual league at WTI. After an intense group stage, the top eight teams qualified for the finals. The floodlit final during the WTI



Christmas party created a true tournament atmosphere. For the first time, an individual competition with 16 participants was also held.

Essen Company Run

Despite continuous rain, 35 GNS runners from Essen and Mülheim took part in the largest E.ON Company Run ever.

- Fastest male GNS runner: Jan Seewald (24th out of 6,437 men)

- Fastest female GNS runner: Kirsten Ix (98th out of 4,829 women)
- Fastest GNS men's team: Jan Seewald, Malte Löwecke, David Sten Dörnte (14th out of more than 3,300 teams)
- Fastest GNS women's team: Kirsten Ix, Marie Borowycz, Maren Bader (59th place)



Via Malaysia to Hawaii

GNS employee Jan Seewald has competed several times in international Ironman events (see also GNS Magazine 12 and 15), consistently demonstrating top-level performances. At Ironman Malaysia 2025, he once again confirmed his standing and secured one of the coveted slots for the Ironman World Championships 2026 in Hawaii.



The traditional race on Langkawi, Malaysia, celebrated its tenth edition and, with more than 1,300 finishers on the full and half distances, is considered one of the largest triathlon events in Asia. Athletes had to cope with exceptionally demanding conditions: air temperatures of around 33 °C, water temperatures of 30 °C, and humidity levels of up to 95 percent.

Seewald delivered an impressive performance across all three disciplines. Finishing second overall and claiming a clear victory in the 40 – 44 age group, he achieved the best possible qualification result.

We congratulate Jan and look forward to the Ironman World Championship 2026. Kona strong – we're keeping our fingers crossed!



Jan Seewald's outstanding result at Ironman Malaysia 2025 secures one of the coveted slots for the 2026 Ironman World Championship in Hawaii.

Charity Campaigns by the Essen Apprentices



Thomas Richter, Sören Rombach, Ermis Marku, Janis Kuhlmann (GNS), Anja Hergaden, Maria Muffert and Vesela Savcheva (Essen Parents' Initiative for the Support of Children with Cancer), Almedina Meta (GNS).

During the 2025 Christmas season, apprentices at GNS headquarters in Essen once again organized several charity activities. In cooperation with VKJ, the Association for Child and Youth Work in Socially Challenged Areas of the Ruhr Region, a Christmas "wish tree" was set up to ensure children receive Christmas gifts regardless of their circumstances.

In addition, the apprentices collected donations from GNS employees for an internal flea market, as well as clothing donations

for the clothing bank. Refreshments were also provided: on several days, the lobby was filled with the aroma of freshly baked waffles.

The proceeds from the flea market and waffle sales – entirely funded by employee contributions – were generously topped up by GNS management, enabling a total donation of € 4,000 to the Essen Parents' Initiative for the Support of Children with Cancer.

Imprint



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