NEWSLETTER

IGD-TP Newsletter
Issue #13, April 2024

Dear Reader

Last year has been remarkable in the nuclear waste management field. EURAD-1 programme is in the ending phase and simultaneously several European organisations have prepared to launch the EURAD-2 programme. IGD-TP has influenced to the EURAD-2 proposal through the WMO core group members actively working in the EURAD-2 preparation team. The WMO core group members are Astrid Göbel, BGE and Ingo Blechsmidt, Nagra. The proposal for EURAD-2 work packages were accepted by European Commission in the end of March 2024. The EURAD-2 combines waste management and predisposal topics and therefore it brings waste generators to the community.

Importance of safe and sustainable management of radioactive waste as part of the lifecycle of clean nuclear energy has been regognised in the Nuclear Energy Summit co-chaired by Prime Minister of Belgium **Alexander De Croo** and the Director General of the International Atomic Energy Agency (IAEA) Dr. **Rafael Mariano Grossi.** The Summit collected world leaders from more than 30 countries and the European Union (EU) in Brussels in the end of March 2024. The world's first high-level meeting focused entirely on nuclear energy, to enforce the outcome of COP28 in Dubai, where over 20 countries committed to work towards the common goal of tripling global nuclear energy power capacity by 2050. Statements from Heads of State and other high-level national representatives highlighted the status of nuclear in their countries and listed important factors in meeting deadlines for the clean energy transition. **Emmanuel Macron**, President of France also highlighted that many countries are progressing with their radioactive waste management programmes. He also mentioned that innovations and new solutions as European approach are needed also for disposal facilities.

IGD-TP Chair **Tiina Jalonen**, Posiva, Finland participated in panel discussion and she brought up the role of spent fuel and waste management and co-operation, and background for success in Finland.

The Nuclear Energy Summit recording can be seen in Youtube through IAEA News pages https://youtu.be/5XtS88WdlLM. The Nuclear back-end panel discussions takes place around 9 hours.

safe solutions for radioactive waste

Tiina Jalonen IGD-TP Chair

CONTENT

Editorial team of the Secretariat
of IGD-TP (Johanna Hansen and Erika Holt)
and project co-ordinators

Contact: secretariat@igdtp.eu
Website: igdtp.eu

Posiva is preparing to operate the spent fuel repository

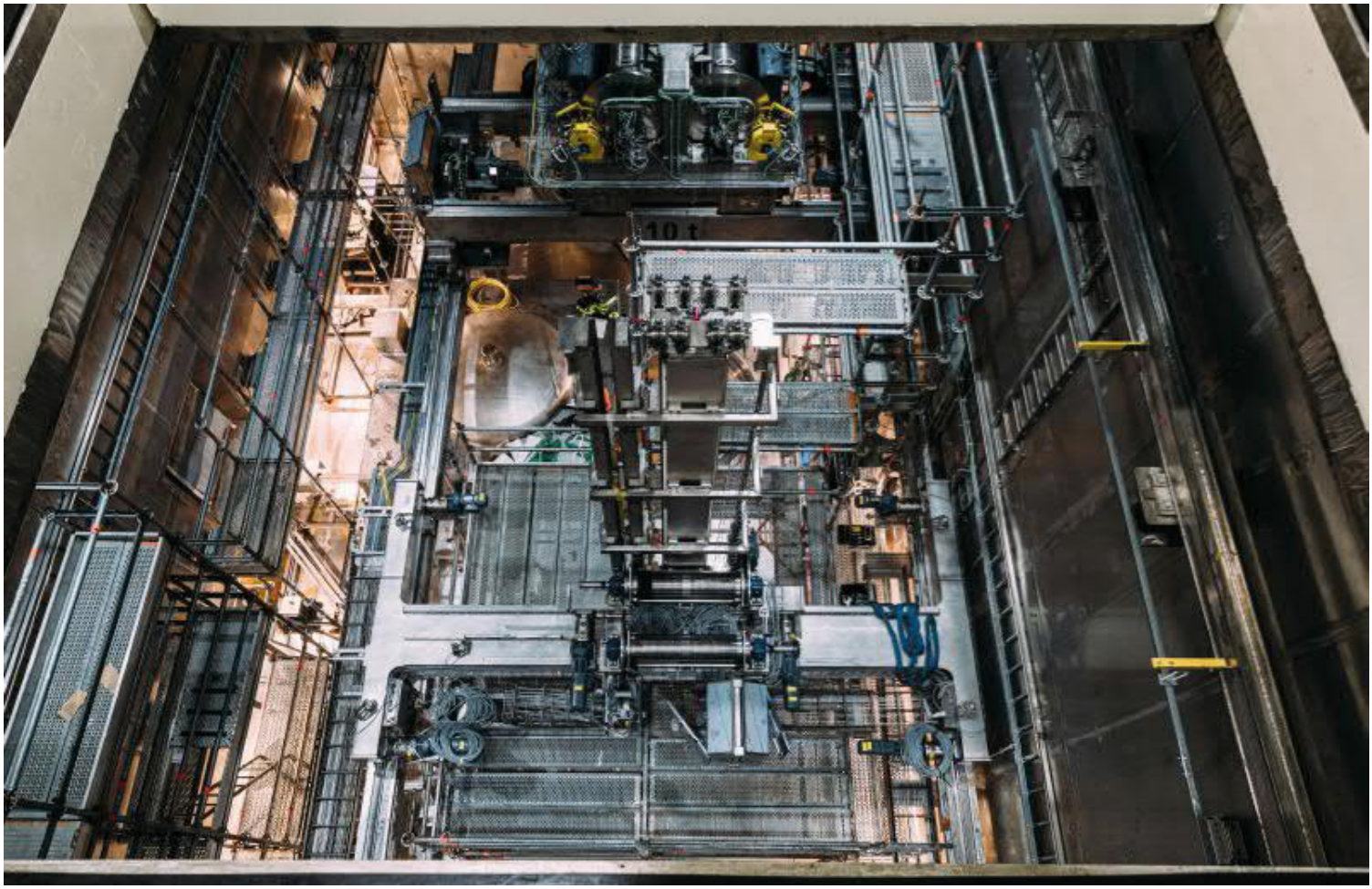
In November 1983, the Finnish Government approved a plan to deposit the spent fuel generated in the operation of nuclear energy deep in the Finnish bedrock. The Government's Decision-in-Principle (DIP) also outlined a roadmap for the selection of the final disposal site in Finland.

Today, 40 years later Posiva is on the threshold of starting the disposal of spent nuclear fuel first in the world. The last installations and commissioning of systems in the encapsulation plant are ongoing and one of the most important systems – the fuel handling machine – was the last major component arrived at the site. This means that soon the whole chain of testing the encapsulation and disposal of canisters will be implemented. The commissioning phase culminates in Posiva's TRFD (Trial Run of Final Disposal), which starts in the Autumn.

Posiva personnel is already using personnel shaft elevator for visiting the repository and soon the canister will do the same in canister shaft. The encapsulation plant and disposal machinery operators are already working with commissioning and set of guidance documents and working methods are verified. The transformation from construction site to the disposal facility is approaching when also the controlled area and uncontrolled area are separated and access to the facilities is done with the same procedures as in the NPP's. This is a big step change to Posiva personnel and the whole organization is preparing for the operating period.

The fuel transfer machine

- The fuel transfer machine is used to transfer fuel assemblies in the handling cell of the encapsulation plant.
- The transfer machine must be able to transfer the fuel assemblies from the transport cask to the drying station and further into the final disposal canister.
- The machine also needs to handle certain protective equipment that have to be opened or installed when fuel is being transferred.
- As a secondary function, the transfer machine facilitates and assists with certain cleaning and maintenance activities inside the fuel handling cell.
- The machine will also need to be able to handle spent fuel from OL3, after undergoing certain inspections, but by then the final disposal of all fuel from LO1&2 and OL1&2 will already have been completed.



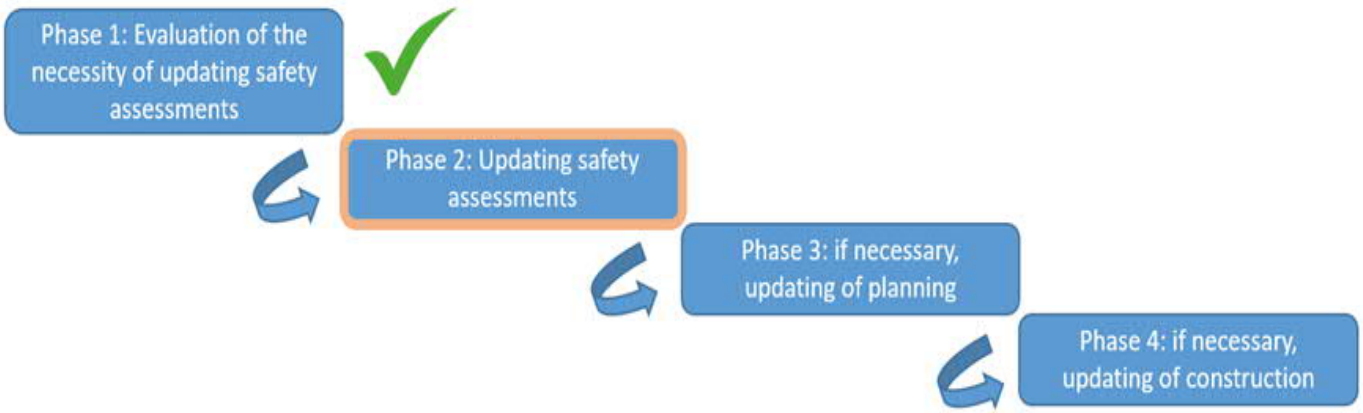
IGD-TP Members stories

The status and progress of the German nuclear waste management programme

After the accident at the Fukushima Daiichi nuclear power plant in Japan in 2011, Germany decided to phase out the production of nuclear energy. The nuclear power plants that were still in operation in 2011 were successively shut down and taken off the grid until April 15th 2023. With the shutdown of all nuclear power plants, there is now a sound basis for capturing the knowledge of the waste inventory.

In implementation of EU and EURATOM directives, the new national Site Selection Act (StandAG) supplemented the German Atomic Energy Act. The institutions and responsibilities in the field of radioactive waste management were reorganised between the years of 2014 and 2017. As a result, two new waste management organisations (WMOs) were established; the Federal Company for Radioactive Waste Disposal (BGE mbH) is tasked with the implementation of the disposal program while the Federal Company for Interim Storage (BGZ mbH) took over the responsibilities for the interim storage of radioactive waste. A new regulatory body for the disposal of radioactive waste was founded: the Federal Office for the Safety of Nuclear Waste Management (BASE, former BfE).The National Citizens' Oversight Committee (NBG) consisting of recognised public figures and citizens was elected to mediate in the site selection for a final repository in an independent, transparent and participatory manner. After the German election for the Federal Parliament in 2021, the responsibilities for nuclear energy and research in nuclear safety and radioactive waste management were transferred from the Federal Ministry for Economic Affairs and Climate Protection (BMWK - former BMWi) to the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV). This includes application-oriented basic scientific research on the topic of final disposal of radioactive waste and the maintenance of expertise through the promotion of young scientists.

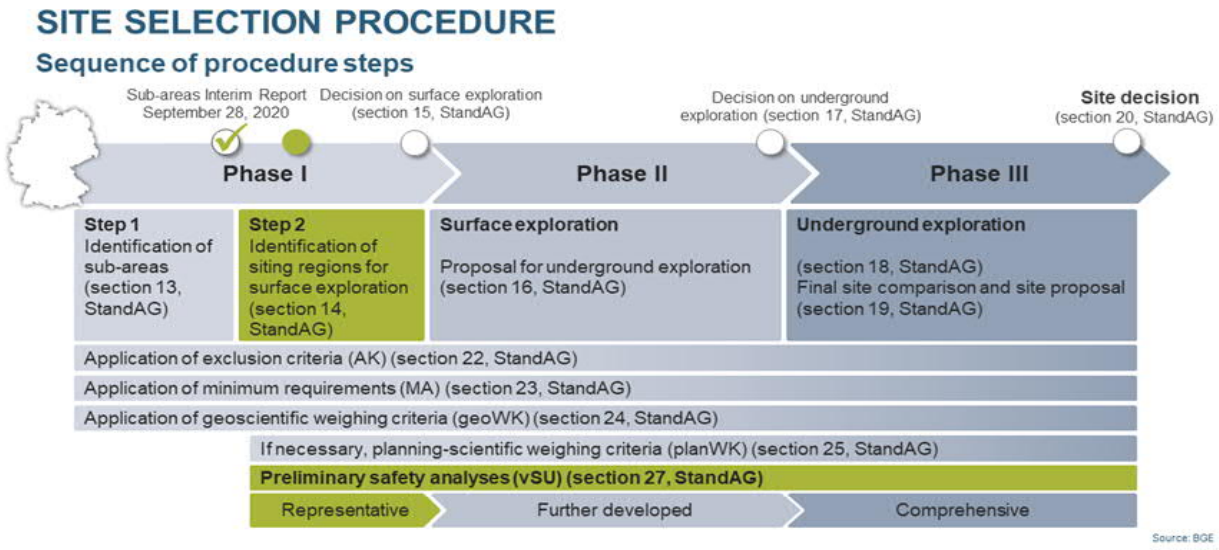
In Germany, all types of radioactive materials are to be disposed of in deep geological formations. Therefore, the Federal Company for Radioactive Waste Disposal (BGE mbH) takes the responsibilities of the construction, operation and decommissioning of deep geological repositories for all types of nuclear waste and the search for a site for a high-level radioactive waste repository. This also includes RD&D and taking the necessary precautions against damage according to the state-of-the-art in science and technology (S&T). Other important tasks of the BGE are the development and implementation of the Waste Acceptance Criteria (WAC) and the product control and licencing of disposal casks.



IGD-TP Member stories

Approval was granted for the construction and operation of the final storage facility Konrad for low- to medium-level radioactive waste within a former iron ore mine in Salzgitter. The repository construction began in 2007. Two shafts were already built in the 1950s while Konrad was still an iron ore mine. Shaft 1 is used to transport the miners, material and overburden. Shaft 2 will later be used to transport the containers with the radioactive waste to the final repository. One of the two haulage plants in Shaft 1 was completely renovated and put into operation in 2018. The second haulage plant is currently still under construction; the replacement of the guide frame is pending and completion is planned for the upcoming years. The winding tower of shaft 1 is a heritage building. The entire shaft tower in Shaft 2 was dismantled and the shaft is currently being renovated. As a large part of the facility will be designed as a radiological control area with very high safety requirements, the construction of the aboveground facilities takes its time. Underground construction work is already well advanced. All necessary drifts are finished and the shaft landing (underground crossing from the shaft into the waste deposit area) has been constructed. As time has passed between the approval to construct the repository in 2002 and now, the BfS (Federal Office for Radiation Protection – the former license holder) initiated an evaluation of the safety requirements for the disposal facility with regard to the state-of-the-art of S&T (ÜsiKo) prior to commissioning (see Figure 1). The aim of the ÜsiKo is the identification and development of those safety arguments in the site-specific safety assessments for Konrad repository, that have faced a progress in state-of-the-art of S&T that may lead to significant safety related consequences. The results of the review may lead to an adjustment of the safety analyses, further planning and implementation of the construction. Completion and commissioning is planned for the early 2030s. In the former German Democratic Republic (GDR), a one-time salt mine in Morsleben was selected for the final storage of low- and intermediate-level radioactive waste, the Morsleben repository. After the German reunification in 1990, low to intermediate level radioactive waste from all over Germany was accepted. Following legal disputes, the disposal of radioactive waste was stopped by court order. After a reassessment, it was finally decided against further waste emplacement in 2001. Since then, the mine is kept open for full repository operation. The objective is the closure of the Morsleben repository while leaving the waste in place. The governmental approval is expected by 2028.

In 1965, the Federal Republic of Germany (FRG) bought a former potassium salt and halite mine called Asse II with the intention to investigate the disposal of radioactive waste. Between 1967 and 1978, 126.000 containers filled with low- and medium-level radioactive waste were stored in Asse II. Research work was carried out until 1995. After completion of the research work, preparations were made for decommissioning the mine. However, because the mine was never officially build as a repository, decommissioning was planned in accordance with mining law without proof of long-term safety. In addition to a very high degree of excavation, which together has led to an impairment of the mine's stability and a reduced load-bearing capacity of the mine building, groundwater has been seeping into the mine since 1988. Demands from society and politics for guaranteed long-term safety led to an amendment of the Atomic Energy Act in 2009 and the requirement that the Asse II mine must be shut down without delay (§ 57b AtG). After examining various procedural options, it was decided that the retrieval of the waste was the best option. Therefore, in 2013, the German Federal Parliament passed a law (Lex Asse) to speed up the process. The retrieval concept stipulates that the entire waste has to be recovered, brought above ground, conditioned, properly interim stored and then finally disposed. As of today, BGE is preparing the retrieval, which includes the exploration of the storage chambers and the design, and testing of novel recovery techniques. The start of the actual retrieval is planned for 2033 and the process will take several decades.



IGD-TP Member stories

With the Site Selection Act, the current German site selection procedure was launched in 2017. In accordance with section 9a(3) sentence 1 of the Atomic Energy Act, the site selection procedure (see Figure 2) aims to identify a site in the Federal Republic of Germany with the best possible safety for a final disposal facility for domestically produced high-level radioactive waste by means of a participative, science-based, transparent, self-questioning and learning process (Repository Site Selection Act, section 1(2)). This repository shall guarantee the safe containment of the disposed radioactive waste for 1 million years. The technical feasibility of waste retrieval during the operational phase must be proofed. For a period of 500 years after the planned closure of the repository, adequate provisions must be made for the possible recovery of the waste. Three host rocks are considered for deep geological disposal in Germany: rock salt, claystone and crystalline rock. The results of the first step in phase 1 of the site selection procedure were published in 2020 in the so-called “sub-areas interim report”. It excluded areas in Germany from the repository search and identified 90 areas that will be examined in more detail in the further procedure. The report represents an interim status of the work of the BGE and serves as a basis for public participation before facts are realised. Currently the aim is to identify a number of favourable siting regions in which surface exploration will be carried out in Phase II of the site selection procedure. Based on this, sites will ultimately be proposed for underground exploration.

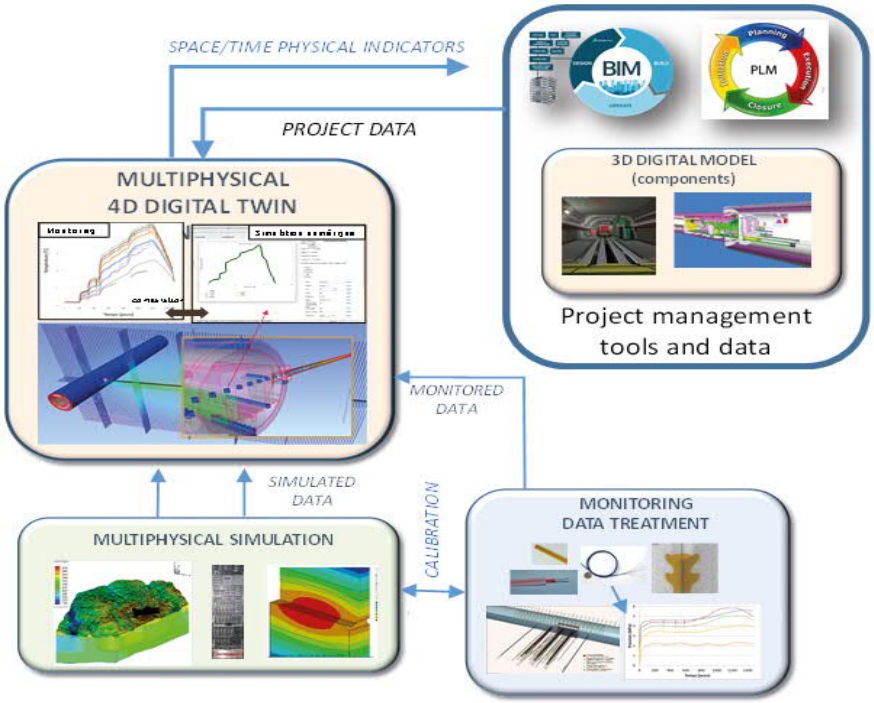
The Site Selection Act strives for that the decision on a site for the construction of a repository should be made by 2031. However, in consideration of work progress on the methodological developments required to accomplish the task, in 2022 BGE published the framework time schedule based on solid project planning. The BGE recommends that a holistic schedule for the coming phases of the site selection procedure should be jointly established, reviewed and evaluated with the involved parties like NBG, BASE and BMUV. With the establishment of a framework time schedule containing the time requirements of BGE for upcoming work steps of the current phase and time frame estimates in two planning options for Phase II and III of the site selection procedure new challenges arise in regards of e.g. interim storage or public participation.

IGD-TP Executive Group

11 representatives from European Waste Management Organisations
- ANDRA, Stéphan Schumacher
- BGE, Astrid Göbel
- COVRA, Marja Vuorio
- ENRESA, Joaquin Farias Seifert
- NAGRA, Irina Gaus
- NWS, Jon Martin
- ONDRAF, Maarten van Geet
- POSIVA, Tiina Jalonen
- PURAM, Gyula Danko
- SKB, Björn Hernschend
- SURAO, Markéta Dohnálková

Photo are taken in 40th EG meeting in Berlin 6th November 2023, Marja, Joaquin and Jon are missing in photo.

Multi-physical Digital Twin of Cigéo to Support Operating Phase



In order to manage all life cycle stages of Cigéo, Andra has been deploying for many years digital and numerical tools, mainly based on BIM (Building Information Modelling) collaborative method, PLM (Product Lifecycle Management) methodology and 3D digital model (including details of all components of Cigéo from surface to underground disposal). In this context, and in the scope of preparing operating phase, Andra has been developing a multi-physical digital twin of Cigéo. The objective is to integrate time/space evolution of process affecting each component in the digital twin, in order to inform on and predict in "real time" the behavior of the system and, therefore, contribute as a decision-making tool for operators. The comparison between combined knowledge from sensors, metadata and numerical simulation (see figure below) enables the operator to verify that the disposal and its geological environment remain within the phenomenological operating range defined in the context of the safety assessments and of the authorisation for commissioning. It will also guarantee the retrievability of the packages. Considering multi-components, multi-materials, multi-time and space scales… leads to a strategy of development consisting of a set of complementary and interdependent local digital twins at the scale of components/process, monitored during construction and operation phase. It thus requires 2 kinds of ongoing works:

- development of an interoperable platform as a digital ecosystem likely to integrate in a single environment all tools from 3D digital model to digital twin. Main challenges are management of interfaces between the different tools likely to collect and gather data from different sources (CAD, mesh, simulation, post-treatment of information…), and automation of numerical conceptualization for each physical problem to be modelled.

- development of methods and tools for numerical simulation in the field of High Performance, involving many couplings. Computing needs to be enhanced in order to get information in a short time, either by quick and efficient solvers or data management. Thus, main R&D efforts about digital twins are carried out on HPDA, HPC and AI topics, which are strongly linked. Main challenges are multiphysical couplings for processes in operational phases, calibration model, data assimilation and fusion algorithms, meta-modelling and the use of machine learning techniques either to get for instance missing information due to failure of sensors or to accelerate time computing.

Developments are carried out as modular "technological bricks" adapted to progressive development of Cigéo, evolution of design and scientific knowledge, and whose combination will allow to set up relevant digital twins. They are tested and validated on various practical examples such as experiments and existing demonstrators in Andra's Underground Research Laboratory.

Update from the Members – Switzerland

Nagra close to submitting general licence applications for combined repository in Northern Switzerland

In September 2022, Nagra announced that, following several decades of extensive geoscientific investigations, it had identified the Nördlich Lägern siting region as the most suitable site in Switzerland for a deep geological repository. While the siting proposal marked an important milestone for Nagra, this public announcement yet remains to be followed up by a century of dedicated work, divided into projects relevant to the immediate, near and distant future.

In the immediate future, the main focus is on the two general licence applications for a combined repository in Nördlich Lägern and the encapsulation plants to be located at the existing site of the interim storage facility in Würenlingen (ZWILAG) that Nagra plans to submit in November 2024. To this end, Nagra employees are working hard to prepare the required documentation, mainly as a number of hierarchically structured reports that feed into each other and demonstrate that official demands on e.g. post-closure safety and environmental protection can be met.

At the same time, Nagra must also look ahead into the near future. The main challenge is the internal shift from being an organisation with a strong focus on research and geoscientific investigations (although these activities remain important) to an organisation that can implement the deep geological repository every step of the way until its final closure.

While the submission of the general licence applications will mark another important milestone, the applications are subject to a close review by the federal authorities and potentially to an optional national referendum.

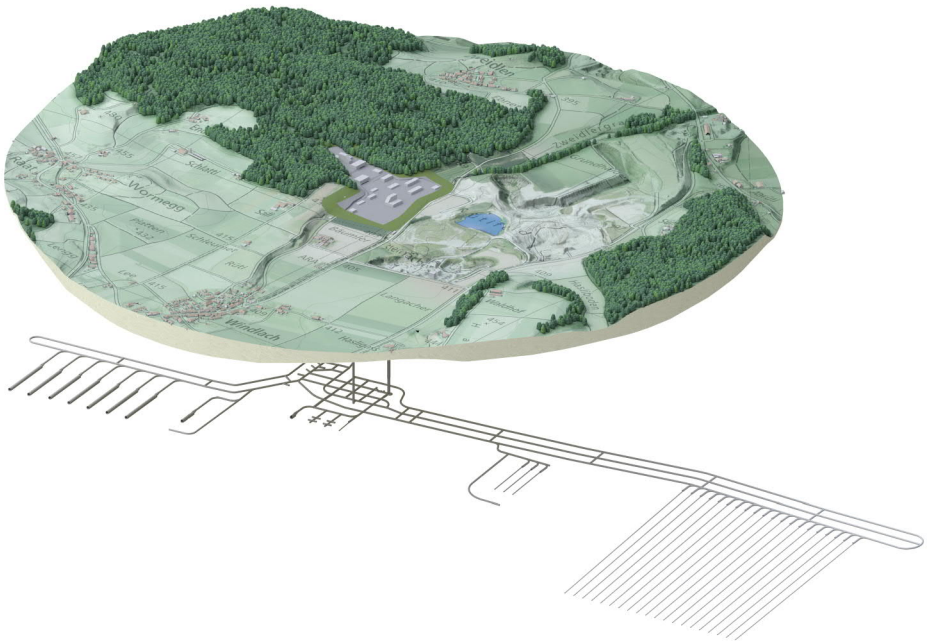
Granting of the licences is thus not just a scientific decision but a highly political one, requiring sound scientific evidence and, at least as importantly, the involvement of the public and the willingness to listen to their opinions and concerns.

Once the general licences have been granted around in 8-10 years from now, the construction team has to obtain licences and prepare for the start of construction. This includes assembling a team of engineers and contractors.

Finally, the new optimisation project is responsible for implementing its slogan “as early as necessary but as late as possible”, i.e. identifying what has to be decided now and laying the groundwork for decisions that can only optimally be made in the future in anticipation of state-of-the art quality, sustainability and cost developments that cannot be foreseen at this point.

All three projects are very closely tied together. Optimisation can e.g. help to ensure that the best and most modern technology will be available when construction is scheduled to start. To successfully realise all overall goals, Nagra places high emphasis on digitalisation, e.g. in the form of Building Information Modelling or gathering all data, models and simulations into one digital environment. The objective is to ensure that everyone at Nagra will have access to a single source of truth at all times.

At every point of this enormous undertaking, Nagra collaborates closely with international waste management organisations, universities and research institutes, fully recognising the invaluable importance of sharing information and learning from one another in anticipation of finally constructing, operating and closing a safe, state-of-the art repository.



Update from the Members – Sweden

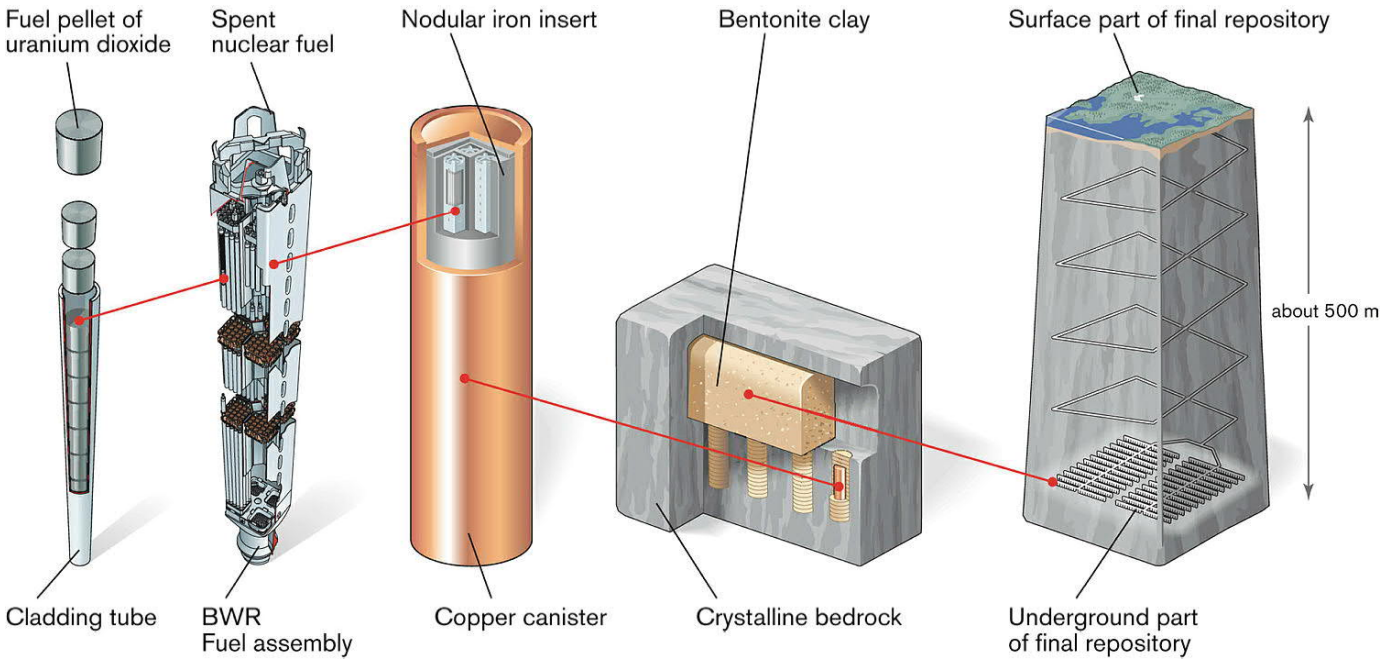
Spent Fuel Repository

On the 27th of January 2022, the Swedish Government decided to allow SKB to build a final repository for spent nuclear fuel in Forsmark in Östhammar Municipality and an encapsulation plant in Oskarshamn. The final repository project will bring investments of around SEK 19 billion and will create about 1,500 jobs. The projects will be financed from the Nuclear Waste Fund. The Government's decision on SKB's repository system was not the last step in the licensing process. Following the Government's permissibility decision under the Environmental Code, the Land and Environment Court will impose conditions for the facilities. The terms and conditions will be negotiated in court in May 2024 and finally established in a court ruling, a prerequisite for starting excavation at the repository site.

Furthermore, the Nuclear Activities Act imposes a stepwise approval process, and the next step will be for SKB to submit an application for construction of the repository to the Swedish Radiation Safety Authority (SSM). This application includes a so-called preliminary safety assessment report (PSAR), which in turn includes an updated post-closure safety case. The updated safety case has already been published and can be found on the SKB webpage (https://skb.com/publications).In parallel with finalizing the PSAR, SKB is preparing for the post-closure safety case update for trial operation and regular operation. This will be an extensive update where all previous comments from SSM must be addressed. Therefore, several projects are ongoing to transfer knowledge and experience from the safety assessment from 2011 to experts how have joined SKB since then.

During the lengthy approval process for the repository, the need for increased interim storage capacity became a more urgent matter. Hence, the application for increasing the interim storage capacity in Oskarshamn (initially part of the same application as the repository) has been the top priority for SKB in the years following the government decision. However, in February 2024 the Swedish Radiation Safety Authority approved increased interim storage and in 2024 SKB will make the necessary preparations to operate the interim storage with the new increased limits for the maximum amount of stored fuel.

In 2024, excavation work for the extension of the final repository for low and intermediate level waste is also expected to start. The extension will be made to accommodate all future operational and decommissioning waste from current Swedish nuclear facilities.



IGD-TP Projects – What is going on?

Kiruna Natural Analogue

The KINA (Kiruna Natural Analogue) project investigated a smectite-rich clay (Figure 1) that has been in contact with a magnetite ore for an extended period (probably in the order of hundreds of millions of years) under repository-relevant conditions in the Kiirunavaara ore body of the Kiruna mine, northern Sweden

The site is considered a 'natural analogue' (NA), of the repository engineered barriers as the magnetite ore serves as an analogue for corrosion products in a steel waste canister, the metres thick clay layers represent the bentonite barrier emplaced around the waste canister and the surrounding ore body country rock represents the repository host rock. As such, the project was initiated to further study the Kiirunavaara clay with focus on:

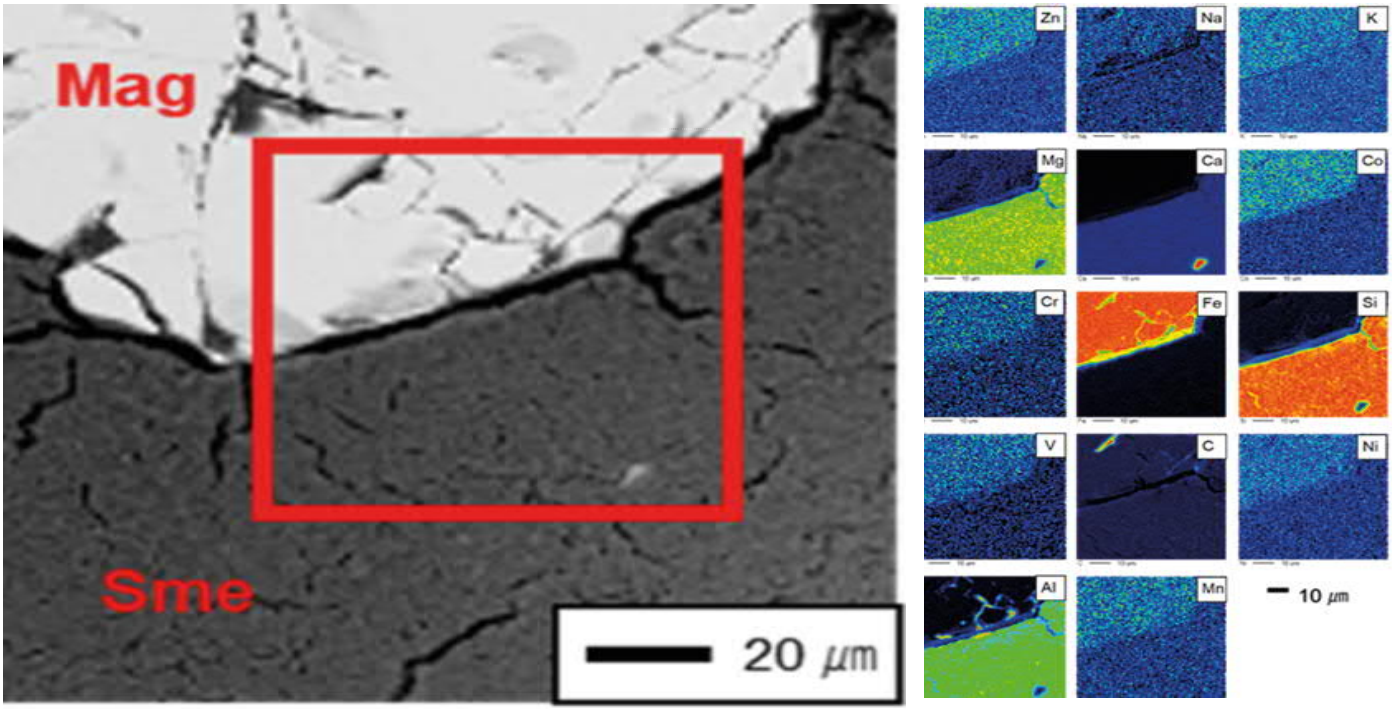
- understanding the very long-term behaviour of bentonite under conditions of direct relevance to deep geological disposal of radioactive waste
- examination of potential long-term iron corrosion products - bentonite interaction (as may occur in the
- the potential for erosion of the bentonite barrier by groundwater in a deep geological repository
- the potential impact of microbial populations in bentonite under repository conditions

Facts about KIRUNA project

- Project schedule: 2019-2024. Due the Covid-19 the end was deakyed until 2024
- Current IGD-TP partners: Nagra, Andra, Posiva , NWS and SKB. NWMO as associated partner.
- Project leader Nagra and SKB
- For more information about the experiment:
- The Malmberget mine (Swedish: Malmbergsgruvan) is one of the largest iron ore mines in the world. The mine is located in Malmberget in Norrbotten County, Kiruna.

IGD-TP Projects – What is going on?

Kiruna Natural Analogue



It has been noted that a drawback of most NA studies is the lack of knowledge of the boundary conditions of the site studied often makes straightforward extrapolation of the results to repository conditions difficult. However, when the existing information on the Kiirunavaara natural clays are combined with the novel data presented here, it would be unreasonable to make such a claim about this site or these natural clays. Indeed, if anything, the new information has made it very clear that the natural clays in the Kiruna mine represent a complex, multi-phase system which has experienced various degrees of reaction over nearly a Ga and this, once again, makes straightforward extrapolation to repository conditions difficult. However, that would ignore the main, safety case-relevant messages which can already be taken from this study, namely:

- the smectite-rich Kiirunavaara natural clays have survived relatively unscathed for periods several hundred times longer than will be required for the commercial bentonites in a repository
- with respect to their smectite content, swelling pressure, hydraulic conductivity and CEC values, these natural clays are, indeed, excellent analogies to the commercial bentonites which will be used in repository buffers, backfill and seals
- historical and novel data presented here indicate that Fe uptake by the natural, smectite-rich clays is minimal, even when the clays are in close proximity to the magnetite for extended periods of time. An example is shown in Figure 2
- although not yet fully understood, the Kiirunavaara natural clays seem to be more stable than commercial bentonites with regards to colloid formation/erosion
- very careful sampling and subsequent sample handling have produced artefact-free samples for microbial analysis and the full results of this work will be available at a later date

IGD-TP Projects – What is going on?

IGD-TP R&D Activities

The waste management organisations (WMOs) undertake many bilateral and multilateral research activities, some of which are organised through the IGD-TP. The ongoing activities, their objectives and current status are summarised here.

Activity	Objective	WMOs Involved	Status
KINA - Kiruna Natural Analogue	**The KINA project aims to investigate a smectite clay body that has been in contact with a magnetite ore body for hundreds of millions of years under repository-like conditions.**	**SKB, Nagra, RWM, POSIVA, Andra, NWMO**	**The project is in ending phase. A short summary of results are presented in this Newsletter.**
CCSC - Climate change in the safety case	As climate evolution is a global topic there are clear benefits in WMOs sharing knowledge and expertise. This project involves exchange of applied methodologies, uncertainty estimations and results between the WMOs to ensure consistent argumentation.	**SKB, Posiva, RWM, ANDRA, Nagra, BGE, COVRA, SURAO, ONDRAF/NIRAS**	A series of meetings have been held so far and a comparison of the results of the different global climate simulations has been started. The work will continue as a separate WP in EURAD-2
PCCS - Post-closure criticality safety	**Criticality safety over long, post- closure, timescales is unique to geological disposal. This project aims to benefit WMOs by sharing knowledge and approaches to demonstrating criticality safety, including discussion of applied methodologies, knowledge gaps and results.**	**RWM, ANDRA, Nagra, ENRESA, SKB, PURAM, BGE, ONDRAF/NIRAS, US DOE, NWMO**	**An annual meeting in April 2024 discussed the technical topics related to the loading curve comparisons and final disposal container design optimisation for criticality safety. Part of the work will be implemented as part of a separate WP in EURAD-2**
Nuclear Waste Disposal and Sustainability	This project aims to exchange knowledge regarding the sustainable desigm, construction and operation of nuclear facilities	**ANDRA, BGE, NAGRA, POSIVA,SKB**	Project will held a kick-off workshop in June 2024.
Seismic hazards assessment	**A workshop is to be held to identify the similarities and differences between WMOs regarding: disposal facility contexts and concepts; regulatory requirements; and seismic hazard assessment approaches. Possible opportunities for further collaborative projects between one or more WMOs may be identified.**	**BGE, COVRA , ENRESA, NAGRA, ONDRAF/NIRAS , POSIVA, PURAM, RWM, SKB, SÚRAO**	**The workshop was held in November 2021. The potential SHA collaboration topics being developed and the future activities planned**
LOMIR - Long-term monitoring of ^{14}C compounds released during corrosion of irradiated metal	This project continues an ongoing corrosion experiment with irradiated stainless steel. Additional sampling will be carried out to i) verify an increase in the ^{14}C content in the gaseous phase with time, ii) verify constant concentration of aqueous ^{14}C-carrying species, and iii) quantify the retention of ^{60}Co by corroding irradiated steel.	**Nagra, SKB, BGE**	Second annual report is published
iCHANCE - Chemotoxic and non-radioactive contaminants evaluation	**Understanding the non-radiological and chemotoxic properties of radioactive wastes is essential. This project involves sharing knowledge and approaches in evaluation of the transport of chemotoxic and other non-radiological contaminants.**	**PURAM, Nagra, RWM, COVRA, ONDRAF/NIRAS, ENRESA, BGE**	**PURAM will compile a summary about practices and approaches in different countries. The report is in review phase.**

Secretariat News and Meeting Announcements

Upcoming Meetings

	SNETP Annual Exchange Forum (2024) Date: 15-19 April 2024, Location: Rome, Italy
	**IAEA Technical Meetings URL Networks** Date: 22-26 April 2024, Location: Mont Terri Rock Laboratory, Switzerland
	**EURAD Final week (2024)** Date: 22.-25. April 2024, Location: Bucharest, Romania
	**PREDIS final event (2024)** Date: 3-7 June 2024,
	NEA ICGR-7 International Conference on Geological Repositories (2024) Date: 27-31 May 2024, Location: South Korea
	**IAEA Conference on Management of Spent Fuel (2024)** Date: 10-14 June 2024, Location: Vienna, Austria
	**NEA Safety Case Symposium (2024)** Date: 10-14 June 2024,
	**Clay Conference 2024** Date: 25.-28. November 2024, Location: Hannover, Germany
	**Waste Management Symposium 2025** Date:9.-13.March 2025 Location: Phoenix, USA

IGD-TP Members

The IGD-TP now has 142 member organisations from 27 countries active in geological disposal. All our member organisations and their contact points are listed at: **igdtp.eu/members**

IGD-TP Website igdtp.eu

We have continued to develop the activities pages on the IGD-TP website by adding historical and ongoing collaborative research projects. You can now find project summaries, key reports and links to further information for 46 projects. We also announce events and news relevant to geological disposal research on our website. Please contact the IGD-TP Secretariat **(secretariat@igdtp.eu)** if you would like to highlight something of interest to our community.

IGD-TP Chair and secretariat role changes in the end of 2024 igdtp.eu

Posiva is chairing the IGD-TP until the end of 2024 and thereafter the IGD-TP Chair and Secretariat role will be handed over to SURAO. The current IGD-TP Chair is Ms Tiina Jalonen and the Secretary General is Ms Johanna Hansen. They are supported by Ms Erika Holt from VTT.

The contact details remains the same as previously **(secretariat@igdtp.eu)**.