

What is a geological repository: the Jean Paul Minon definition

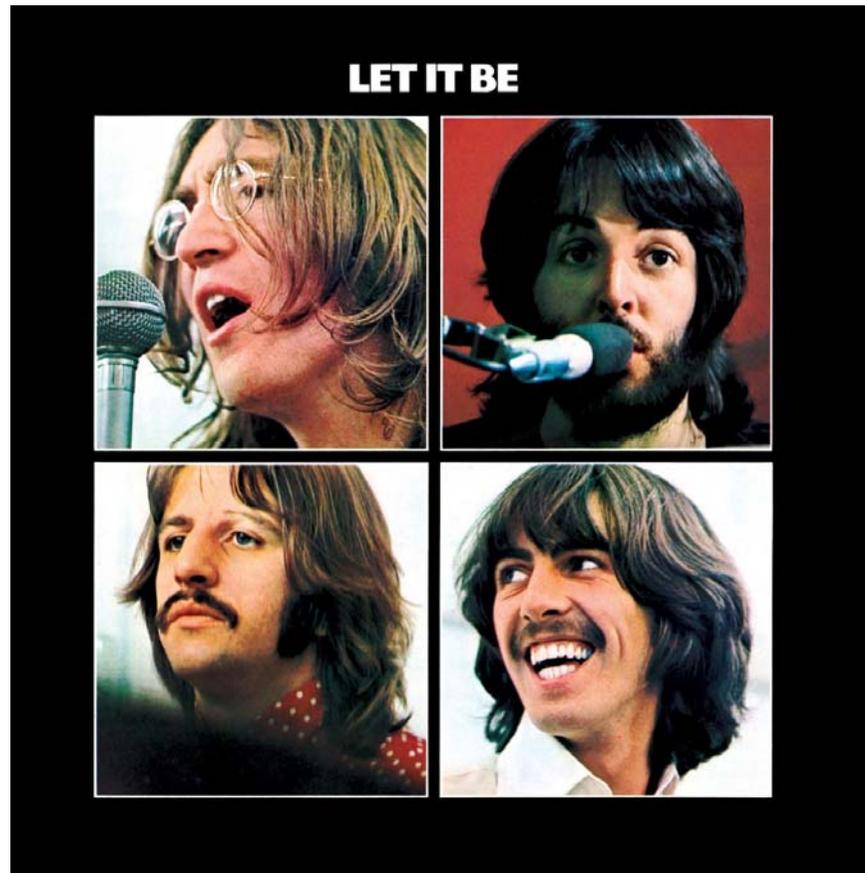
Safe and feasible solution which is sustainable (economy, environment society) and supported by regulation, legislation and organisation

This is a kind of Teaser



The B842 road which runs down the east coast of Kintyre and on into Campbeltown in Scotland

So you don't get it?



Do you want me to help ?

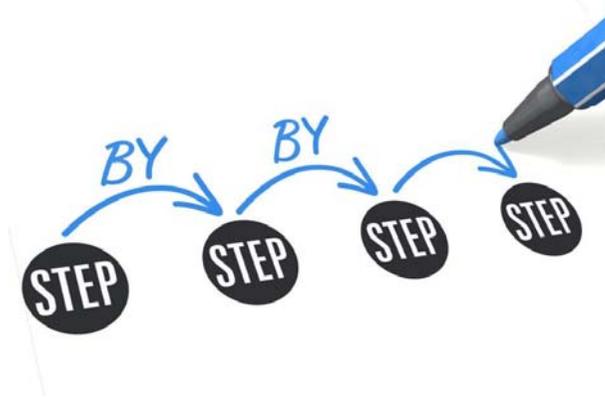
But still they lead me back
To the long winding road
You left me waiting here
A long long time ago
Don't leave me standing here
Lead me to your door

(J. Lennon and P. Mc Cartney « let it be » album; 1970)

Mc Cartney composed this song in a windswept and very rainy place where there is precisely a long winding road

As said by Christopher Eckenberg : the pathway to repository licensing and operation is « a long and winding road »

A long road....but



Decades are necessary to go from the very first stages of siting to the licensing

- ◆ Virginie Schwarz showed the usefulness of the 25 years of work in France along with an adapted legislative process;
- ◆ Thomas Ernst illustrated a cautious progression through the Sectoral Plan for deep geological repository siting and development in Switzerland (over 20 years);
- ◆ Christopher Eckerberg described a 55-year long process in Sweden from methodological development to the beginning of operations
- ◆ Frederic Launeau recalled the importance of the incremental development of Cigéo.

A long road...but



anticipate the next step

- ◆ We must anticipate and always prepare the next step, even if the conclusions of the previous one are not yet established.
- ◆ We are working in the long term over long periods and we need to be cautious and give a robust view of our agendas while being able to adapt to societal, economic or technical political developments.
- ◆ Frederic Plas showed that the huge acquisition of geological data over 25 years allowed progressive focus on the most favorable area for implementing the repository.



A winding road...but a stepwise approach

- ◆ Deep geological repository projects are the first of a kind in each country
- ◆ Timescales for licensing are related to a stepwise approach for safety evaluations.
- ◆ The stepwise approach allows the development of very specific concepts such as reversibility to be fully developed and understood (Panel discussion of session 2)
- ◆ Allows you to prepare the host territory with infrastructure, while including numerous stakeholders and coordinating multiple activities
- ◆ Building trust is a continuous project (Haidy Tadros; Canada)



A winding road...but an ability to restart the process

- ◆ British history presented by Bruce McKirdy has shown that even in a country where very significant preparatory work has been carried out, there may be a blockage which leads to a restart of the siting process.
- ◆ Christi Leigh discussed the WIPP incident (February 2014) and reminded us that we must always be careful, plan for the unexpected and be aware that the requirements placed on our systems are very important.
- ◆ Gabrielle Honti (PURAM) mentioned the influence of major changes in political governance.
- ◆ Scott Moore showed how taking stock of feedback can help in redesigning new engagement processes.
- ◆ We must therefore be able to question ourselves at any time to adapt to fluctuating situations and sometimes go back to basics.

Evolving our concerns wisely



- ◆ Since 1999 main issues discussed at ICGR have shifted from challenges to progress, common objectives, commitments and to implementation
- ◆ In previous years, the concepts and experiences we have discussed included: geology, inventory, feasibility, radionuclides, siting, safety case, long-term safety.
- ◆ During these two days we have discussed new challenges such as licensing procedures, organization of operations, cost estimates, local development, operational safety, and the importance of continued engagement
- ◆ Establish durable relationships that will sustain projects through their operating phase and beyond (Jo-Ann Facella, FSC)
- ◆ Each country needs to find a safe and effective way forward (Bill Magwood)

....Taking your time is the best way not to lose (Nicola Bouvier, Swiss writer)

Shared key factors for success

- ◆ Build a project on a robust basis for safety
- ◆ Keep ensuring a strong engagement of all stakeholders
- ◆ Ensure planning reliability
- ◆ Credible and independent regulator
- ◆ A professional implementing organization
- ◆ Continued research and technology for accompanying the licensing, construction and operations process, to update the safety case, and to incrementally take stock of technology progress
- ◆ Choose the right framework, scale and focus for dialogue
- ◆ “Win-win” process with the population
- ◆ National commitment supported by parliament is needed as well as local commitment supported by elected representatives



Janne Mokka provided us with elements of success that led to a successful licensing process

Foster international cooperation

- ◆ Bill Magwood's welcome address: « Bonjour mes amis », Making progress as a community, share a safe and effective way
- ◆ International cooperation is integral to scientific progress but industrial co-operation has to take into account the protection of interests in patents and intellectual property
- ◆ We build on each other's successes, we have to learn together to go further (Andrew Griffith)
- ◆ It is important to hear from the USA that such a great nation of scientific and nuclear research still benefits from international cooperation for establishing the new foundations for restarting the RD&D on disposal.
- ◆ There is relevance in having regular exchanges and multilateral actions conducted within international organizations

International cooperation

But for cooperation to work, it is necessary for people to be involved in building bridges, gauging differences, facilitating exchanges. Programs are important, the international governance tools are essential, but those who are at the interfaces have a vital role in establishing dialogue between us as well.

