



Press release

Breakthrough NSPS technology installed in Chernobyl will remediate radioactive contamination within 5 years.

- **A reduction of radioactive contamination has already been observed 7 months after installation of the technology, with the objective to reach a total remediation within 5 years**
- **The NSPS achieves separation of radioactive material using high velocity particles**
- **This breakthrough technology will allow a lasting decontaminated of radioactive polluted soils without moving earth and without any chemicals.**

Chernobyl, Ukraine – April 26, 2021 - SSE Ecocentre, the Ukrainian state owned specialized enterprise in charge of radiation and environmental monitoring in the Chernobyl exclusion zone, and Exlterra, a Swiss company at the forefront of innovation in sustainable development, today announced a significant experiment, which began after the completion of the installation of a breakthrough underground technology on a 1-hectare site located in the Chernobyl exclusion zone. The Nucleus Separation Passive System (NSPS), a revolutionary technology installed at Chernobyl, considerably accelerates radioactive decay by harnessing existing energy in the earth. Positive observations of a reduction of radioactive contamination have already been established. The full results will be announced in September 2021, one year after completion of the installation of the NSPS technology in Chernobyl.

The announcement was made on the occasion of the 35th commemoration of the Chernobyl accident, which is considered the worst nuclear disaster in history. It triggered the release of substantial amounts of radioactive contamination into the atmosphere and required the evacuation of more than 100,000 people.

“For the first time in 35 years, we, together with counterparts from Exlterra, have installed such a technology in the exclusion zone of Chernobyl. The scientific process is completely unprecedented and original and seven months after completion of the installation, measurement of radioactive contamination at the site began,” said Sergiy Kirieiev, director general of the SSE Ecocentre in Chernobyl.

“We are on track to reach our longer-term objective of returning the installed zone to baseline /natural levels 5 years after completion of the installation.” explains Frank Muller, CEO of Exlterra.

Methodology

To provide a controlled experimental environment, all variables were kept the same (types of measurements, depths of measurements, location of measurements, measurement instruments) and radiation levels were measured prior to the first installation in October 2019. Radiation measurements were carried out by SSE Ecocentre in April 2021.

Dose rate levels were measured at a distance of respectively 5cm and 1 meter from the ground and soil samples were taken from a depth of 270-300 cm below the surface. The following radionuclides were measured in the soil: Cs137; Sr90; Pu238; Pu 239+ 240; Am241.

“Our technology is starting to achieve what was considered up to now, impossible to achieve. We are very pleased with the consistency of the results already observed so far,” said Andrew Niemczyk, President and CTO of Exlterra. *“We expect further reductions in radioactivity until September 2021, when we will provide the detailed one-year results following the installation of the NSPS technology.”*

High velocity particles to annihilate radioactive material

In short, the NSPS technology uses scientific concepts of particle physics and nuclear energy to solve the problem of severe radiation contamination. It leverages in particular high velocity particles, also known as positrons, to direct this naturally occurring force towards radioactive isotopes in the soil and breaks the bonds holding them together. This is done safely under the surface of the soil and no radioactivity is released further into the ground or above the ground in the air. Once the positron comes into contact with the radioactive isotope, it rejoins an electron and annihilates back to its original matter.

Andrew Niemczyk explained: *“This invention is unique because it is the first of its kind to provide a pathway for positrons to naturally accelerate in a passive system to remove contaminated areas. It harnesses renewable energy sources present in nature to considerably accelerate the natural decomposition process of contaminants in the soil.”*

“We must learn to manage a heavy legacy while preserving the future. Cleaning up and remediating polluted land is therefore a major priority in order to make them viable again. Our solution demonstrates that we can do this without chemical artifacts and without condemning or displacing contaminated soil. We also know that today there is no solution for certain types of pollution. Our process is a natural response to this alarming situation,” adds Frank Muller.

A scientific breakthrough to solve major soil contaminations around the world

Beyond radioactive contamination, Exlterra plans to develop a series of decontamination technologies addressing other types of contaminants, using the same novel technique. An endemic problem which affects our health, compromises our food security and the quality of drinking water, alters biodiversity and contributes to the forced displacement of populations. The economic losses caused by soil degradation are estimated at around 10% of the world’s GDP. (Source: [link](#))

“Soil pollution is the result of nature's inability to absorb the amount of contaminants that accumulates,” concluded Andrew Niemczyk. *“Exlterra is taking action, with the sole objective of developing the technologies of the future that use resources and natural properties whose potential is not yet harnessed, but which are already showing very promising results.”*

For a detailed description of the NSPS technology, its mode of action and characteristics, please consult Annex 1 attachment.

About SSE EcoCentre

SSE EcoCentre is a state specialized enterprise of Ukraine responsible for radiation and environmental monitoring in the Exclusion Zone, an area of 2,600 km² located in Chernobyl, around the failed nuclear reactor. Its General Director is Sergiy Kirieiev, a Ukrainian scientist, author of scientific papers in the fields of radiation monitoring of the environment. Mr. Kirieiev is also Head of the Scientific and Technical Council of the Chernobyl Research Institute.

About Exlterra

Exlterra (Excellence for Earth), a Swiss based company with offices in Detroit (Hazel Park) at the forefront of innovation, develops, produces, and commercializes sustainable technological solutions applied to the environment.

Based on the principles of effectiveness, simplicity, and sustainability, Exlterra's products harness nature's forces and renewable energy sources to operate and achieve tangible results. They are energy-passive and maintenance free. Those innovations tackle soil impoverishment (Nutrient Enrichment Passive System - NEPS®), manage stormwater issues (Groundwater Energy Passive System – GEPS) and remediate contaminated soils (Nucleus Separation Passive System - NSPS).

Specifically designed to install its technologies, Exlterra has also developed and produces HAZL® and MAZL, two ultra-light and compact drill rigs.

Since its foundation in 2013 following the meeting of Polish born US inventor Andrew Niemczyk and Swiss entrepreneur Frank Muller, Exlterra has been awarded eight patents and successfully installed its technologies on three continents. The company is active on the European, American and Japanese markets.

Exlterra – rebalancing nature to preserve life

<https://www.exlterra.com/>

About Andrew Niemczyk, President, CTO and Founder of Exlterra

Polish native Andrew Niemczyk's breakthrough NSPS technology is featured in a new book released today, "Ground for Freedom: Saving Chernobyl," available at Amazon as a paperback or eBook. The book by award-winning author and journalist R.J. King details how Niemczyk used 100 percent of his brain's capacity to develop technologies that safely clean radiation-scarred sites like Chernobyl, transform hydraulic power, boost the nutrition levels of trees, and upend human understanding of physics, energy, nature, and life as we know it. The book is available at www.SavingChernobyl.com.

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