

C4-PON: Establishment of a Cross-border Competence Center for the Characterization of (micro) Pollutants and their (in)organic Nanovectors around decommissioning sites: Application to the Grand Canal of Alsace and the Old Rhine (Fessenheim site, Alsace)

Project partners
Karlsruhe Institute of Technology, universities of Strasbourg and Haute-Alsace
Project duration / Awarded funding
01/02/2020 – 31/01/2022 / 38,000€
Short description of the project
The project focused on the problem of notably metallic micro pollutants in the context of the decommissioning of nuclear facilities. At the Fessenheim site, extensive analyses were performed associated with the assessment of the potential mobility of these micro pollutants in the ecosphere. As part of the project, a comprehensive methodology – transferable to various industrial places and scenarios – was developed. The partners aim to set up a cross-border competence center in the frame of Eucor – European Campus, dealing with respective environmental analyses and their assessment.
Concrete implementation of the project (What was the funding used for?)
<ul style="list-style-type: none"> ▪ On February 22, 2020 the first reactor of the Fessenheim nuclear power plant (NPP) has been shut down, the second on June 29, 2020. This defines the T0 (Time-zero). ▪ We organized several sampling campaigns (despite the COVID-19 pandemic) between the 24th of June 2020 and the 10th of March 2021. Our results bring some data just before and after the shutdown (T0). ▪ We bought consumables and AMS measurements beam time at VERA (University of Vienna). ▪ We financed master thesis students.
Project result(s) and continuation of collaboration
<ul style="list-style-type: none"> ✓ Metallic trace elements (MTE) concentrations lie at or below typical river water levels. ✓ Ultra-trace anthropogenic actinides concentrations originate from fallout of atmospheric weapon tests. ✓ Organic matter detected and characterized using spectroscopic, fractionation and mass spectrometry methods; seen as being a potential MTE vector. ✓ No impact from the industrial site evidenced. ✓ Future collaboration expected in the frame of the global IdEX Juxta Rhenum project (OHM Fessenheim)

Further information (links, articles, photos)



Other Links :

- <https://ohm-fessenheim.fr/a-propos/presentation/cadre-general-ohm>
- <https://ohm-fessenheim.fr/recherche>
- International Commission for the Protection of the Rhine (ICPR, www.iksr.org)
- <https://www.sustainability-upperrhine.info/forschung-innovation/aktuelle-projekte/machbarkeitsstudie-zur-innovationsregion-fessenheim> .