

## NUCLEAR DIVING in controlled areas



Over the last 30 years NUVIA divers have completed several thousand hours of underwater operations in the most demanding nuclear environments. As early as the 1990's NUVIA was undertaking underwater dismantling operations in two nuclear fuel pools, at Bugey 1 and Saint Laurent des Eaux A NPP's, processing 100 tonnes of stainless steel scrap immersed in an alpha-contaminated environment. Meeting the strict safety requirements for underwater works, including consideration of ALARA, is by now a matter of routine for NUVIA's operations teams.

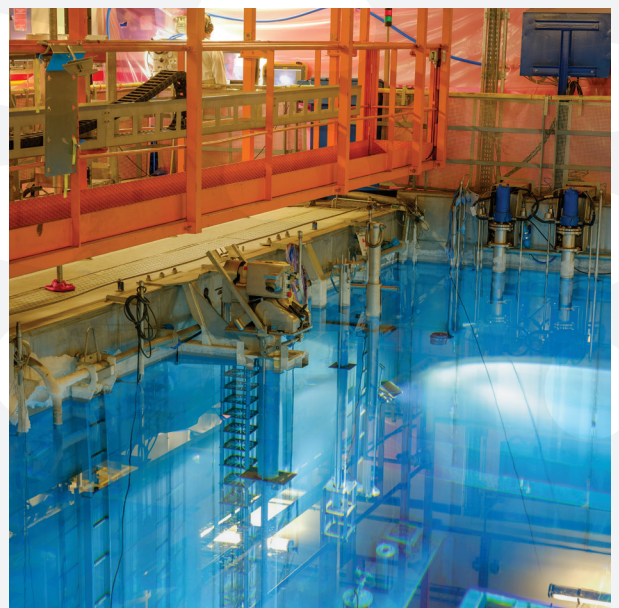
### Projects

**Customer:** EDF

**Sites:** Cruas Meysse, Golfech, Gravelines, Cattenom power plants

**Scope:** Underwater decontamination operations at multiple Nuclear Power Plants.

**Type of contract:** 8-year decontamination framework contract covering EDF nuclear stations in France



NUVIA provides expertise which optimises time and dosimetry without the obligation of draining:

**Dry maintenance**

VS

**Underwater maintenance**

Work in ventilated suits:

duration:  
**12 hours**

Collective dose uptake:  
**4 man.mSv**  
(CRUAS FEEDBACK)

Work in diving suits:

Dive duration:  
**3 hours**

Collective dose uptake:  
**0.5 man.mSv**  
(CRUAS FEEDBACK)

## Examples of operations

### Decommissioning & Dismantling

Hyperbaric operators are able to dismantle, process, clean, and dispose of large quantities of HLW/ILW.

### Maintenance

Underwater mechanical maintenance provides a unique, safe and flexible solution with the benefit to the Owner of:

- Securing the scheduling of plant unit outages
- Quickly modifying structures to make them compliant with new requirements
- Ensuring that safety is maintained
- Reducing secondary effluents and wastes
- Reducing dose uptake

### Underwater cleaning and decontamination

When required, NUVIA dismantles underwater equipment to be able to access hidden surfaces for decontamination.

### Post-Fukushima changes

- Upgrade of installations
- Modifications
- Work under Nuclear Safety Authority derogation

### Incidental work

- Fuel Handling and Storage System

