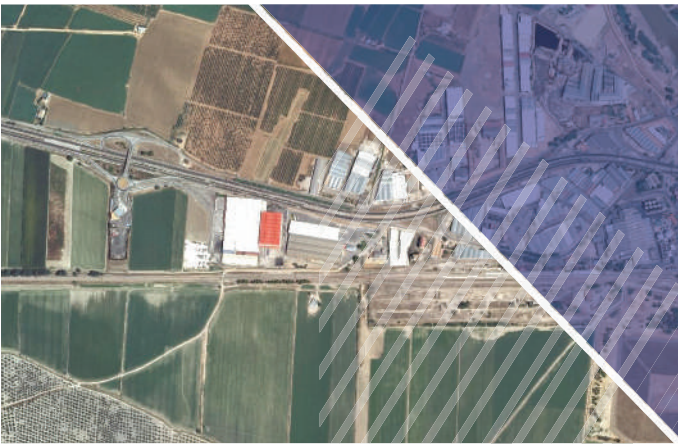




SITE RESTORATION  
AND DISMANTLING  
OF THE FIRST STAGE  
FUEL CYCLE FACILITIES



010010111



# RESTORATION

AND DISMANTLING

OF THE ANDUJAR URANIUM MILL

The Andujar Uranium Mill processed uranium ore to obtain uranium oxide concentrate (Yellow Cake) from 1959 until 1981. Dismantling work was carried out between 1991 and 1995 and was financed by Enresa.

The dismantling of the plant required the decontamination and segmentation of equipment and the demolition of buildings.

The end-products of both processes were incorporated into the tailings pile.



The restructuring of the pile involved the slope reshaping and redistributing of the tailings and the spreading and compaction of contaminated soils from cleaning of the site in the upper part of the pile. This was stabilised and overlaid with a multilayer cover and re-vegetation.

The Monitoring Plan involves assessing the quality and protection of surface and groundwater, geological and geotechnical stability, radon emissions, possible changes in the pile's covering multilayer, intrusion , etc.



# TIMELINE OF MINING ACTIVITIES AND MANUFACTURE OF CONCENTRATES IN SPAIN

EXPLORATION  
AND  
OPERATION



**1948**



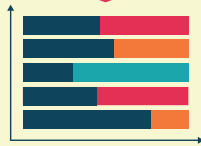
DEPOSITS IN  
ANDALUSIA,  
EXTREMADURA  
AND  
CASTLE LEON

**1984**

MINING



**1950**



MINES IN COR  
DOBA, JAEN,  
BADAJOZ,  
CACERES AND  
SALAMANCA

**2000**

FABRICATION  
OF  
CONCENTRATES



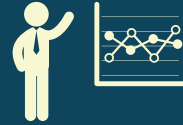
**1958**



ANDUJAR  
URANIUM MILL,  
ELEFANTE, LA  
HABA AND  
QUERCUS

**2002**

RESTORATION  
AND  
DISMANTLING



**1991**



ANDUJAR URANIUM  
MILL, LA HABA MINES,  
PRAMU EXTREMADURA,  
PRAMU ANDALUSIA,  
ELEFANTE PLANT,  
SAELICES MINES AND  
QUERCUS PLANT

**2016**

Mining activity started in 1948 and ended in 2000 with the closure of the last operating mine, located in Salamanca. As a consequence of the discontinuance of uranium mining, ore processing facilities have also been closing. The old mines dismantled facilities are now in the monitoring phase.

# DISMANTLING OF THE ELEFANTE PLANT

This decommissioning programme was divided into three independent projects, according to the characteristics and structures involved:

Dismantling of the Elefante Plant

Restoration of the mines

Dismantling of the Quercus Plant

(involved in the CSN licensing process)

The Elefante Plant was operational from 1978 to 1993. Restoration activities were undertaken during the period 2001 to 2004.

Dismantling activities consisted of the demolition of the industrial manufacturing buildings' equipment and structures, the disposal of the resultant rubble and scrap metal in a confinement enclosure, the restructuring in situ leaching piles and the construction of a multilayer cover to confine the waste materials.

The monitoring and surveillance programme for groundwater and structural stability is under way since January 2006.

2004

# RESTORATION OF THE Saelices Mine

tonnes of materials managed  
by the end of the project  
was radioactive waste.”

Uranium mining in Saelices El Chico, in Salamanca, began in 1954 and continued until 2000. During this period, mining operations produced about 5,700 tonnes of uranium concentrate. The final site restoration project was begun in 2004 and involves an area of 300 hectares.

Environmental restoration of the mining sites and waste piles, as well as the work of installing a multi-layer protective cover over the restored areas, have involved moving 19 million m<sup>3</sup> of land. Both the restoration work on the mines and the dismantling and decommissioning of the Elefante Plant have been co-financed by Enusa and Enresa.

A wide-angle landscape photograph showing a flat, open area with sparse vegetation and a few trees. The sky is overcast with grey clouds. The terrain appears to be a mix of natural and possibly restored land.

2008

A wide-angle landscape photograph showing a more developed and restored landscape. There are more trees, a winding road, and some buildings in the distance. The terrain is more varied and appears to be a mix of natural and restored land.

2016

# RESTORATION OF THE LA HABA MINE

## AND DISMANTLING OF THE LOBO-G PLANT



**La Haba  
Mine  
before**



**La Haba  
Mine  
after**

The uranium mine at La Haba, located in Badajoz, was operational between 1966 and 1990. Restoration of the mine was carried out between 1989 and 1995, and the dismantling of the Lobo-G plant was undertaken between 1996 and 1997. The old in situ leaching piles were transported and compacted, together with the end-products from the plant's dismantling, on the tailings pile. The whole pile was then overlaid with a multilayer cover to minimise Rn-222 emission and erosion.

The monitoring and surveillance period began in 1998, and in 2004 the declaration of decommissioning was issued for the restored site of the Lobo-G plant. The site is currently undergoing an institutional programme of long-term monitoring.



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