



**PRESENT SITUATION AND ISSUES  
FOR THE FRENCH RADIOACTIVE WASTE MANAGEMENT AGENCY**

**M.C. DUPUIS Andra - CEO**

**JOINT CONVENTION MEETING -  
VIENNA - 13th May 2009**

COM.TR.ADI.09-0006

AGENCE NATIONALE POUR LA GESTION DES DÉCHETS RADIOACTIFS



**Andra  
French National Radioactive Waste Management Agency  
Content**

**Planned disposal facilities**

- LL-LL
- HL & IL-LL

**Operated disposal facilities**

- LIL-SL
  - »Centre de la Manche
  - »Centre de l'Aube
- VLL
  - »Morvilliers facility

**Public missions**

- Collection of radioactive items
- Remediation of polluted sites
- Inventory of radioactive waste

## PLANNED DISPOSAL FACILITIES

Low level long lived waste (LL-LL)

High level & Intermediate level long lived waste (HL & IL-LL)



### LL-LL WASTE : GRAPHITE WASTE AND RADIUM BEARING WASTE 2011: public debate, site selection 2013: application 2019: start up Facility design

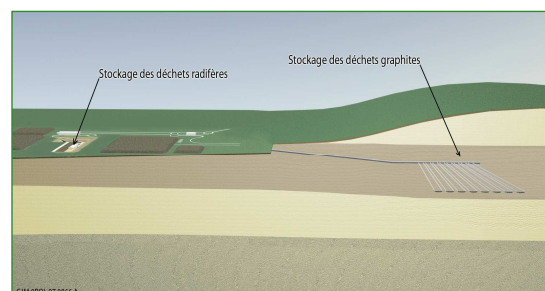
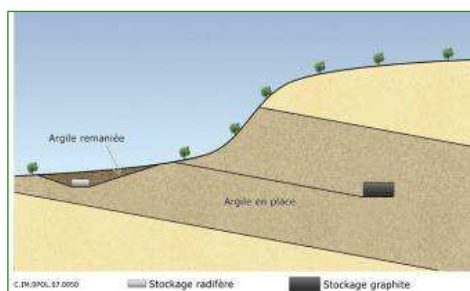
Graphite waste  
22 900 t  
100 000 m<sup>3</sup>



Radium bearing waste  
~30 to 60 000 t  
~35 to 70 000 m<sup>3</sup>

#### Implementation within a shallow clay formation (between 15 and 200 m in depth)

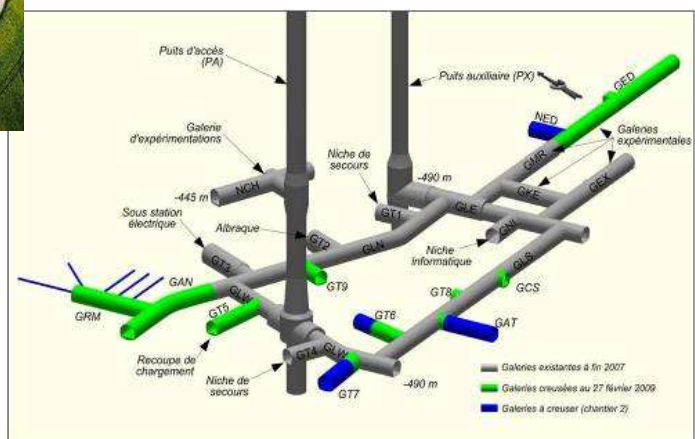
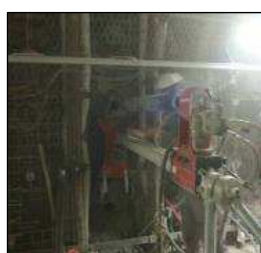
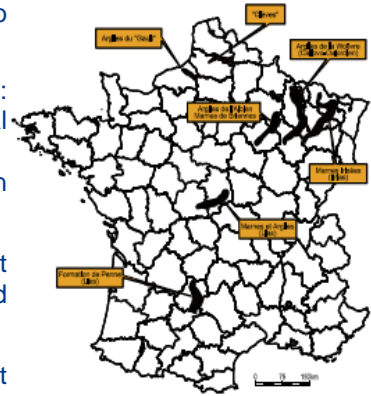
- For graphite waste, a “repository with an intact cover” as a reference option
- For radium-bearing waste, a “repository with a reworked cover” under investigation



*The required footprint on ground surface is in the order of 100 ha*



- June 2008, the 2<sup>nd</sup> : letter from the Minister of State to the Chairman of Andra
- June 2008 : file addressed by Andra to the mayors of 3,115 communes
- Until the end of October 2008 : expression of interest by local communities. Possibility to confirm their application in late 2010
- December 2008 : assessment report by Andra and proposal of ranked zones to the government
- Beginning of 2009 : government decision concerning the pre-selection still pending
- 2009-2010 : geological surveys, consultations, territorial projects



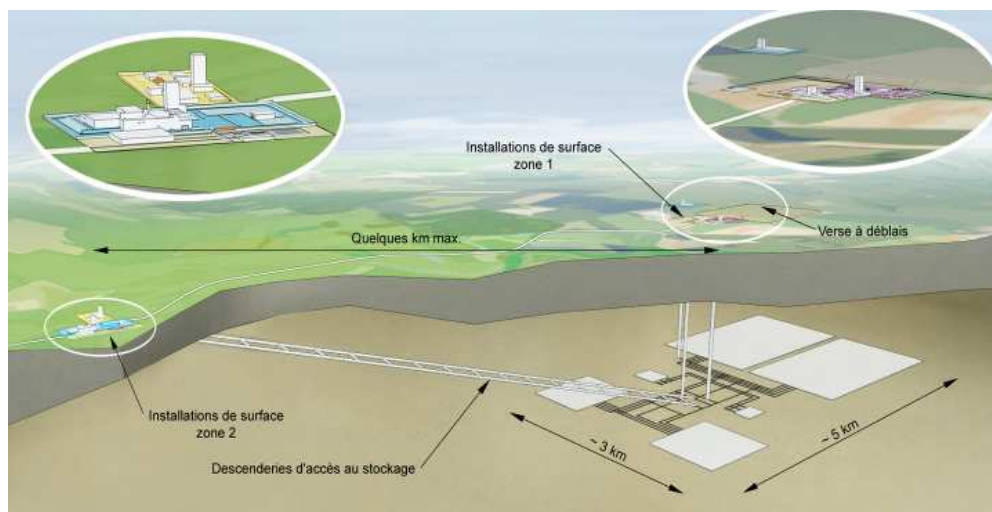


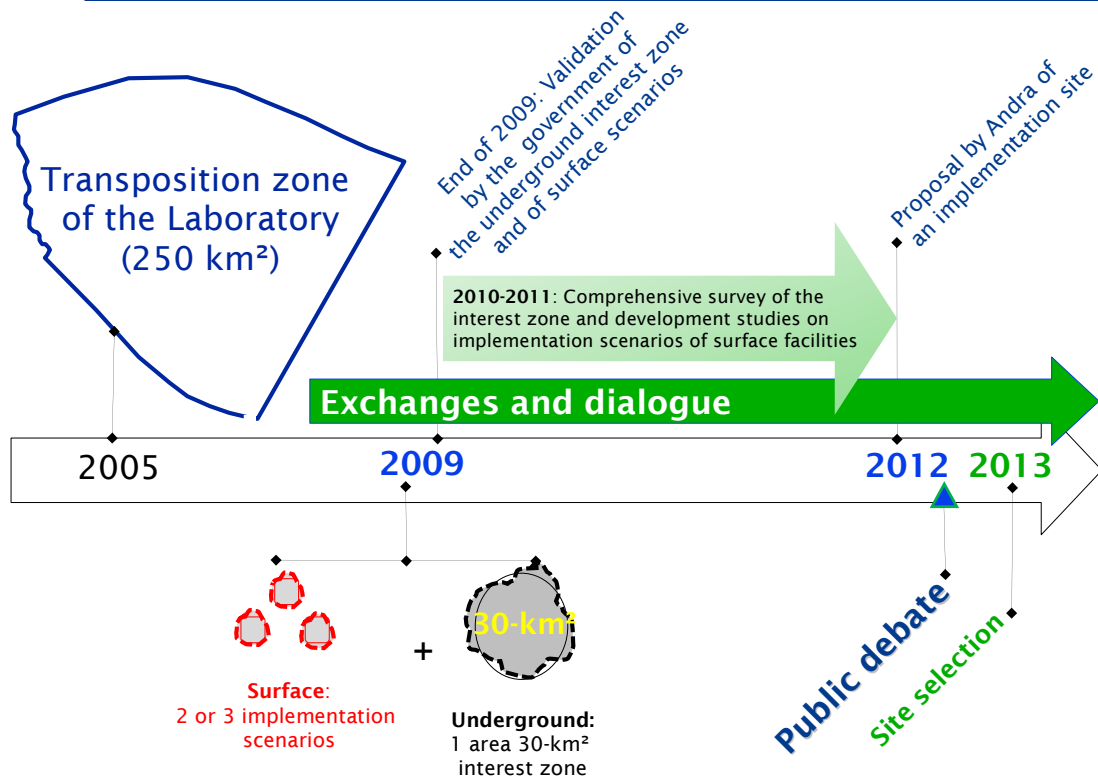
« transposition zone »  
250 km<sup>2</sup>

Underground laboratory



2007-2008 drilling campaign





**Construction of a Visitors' Centre** designed to present the waste-repository project and its technological aspect.  
*Inauguration scheduled in June 2009*



## OPERATED DISPOSAL FACILITIES

Low and intermediate level short lived waste (LIL-SL)

Very low level waste (VLL)



### LIL-SL WASTE: CENTRE DE LA MANCHE DISPOSAL FACILITY 1969: start up 1994: end of operation 2003: institutional control period INSTITUTIONAL CONTROL PERIOD MONITORING

Disposed volume (1969-1994) : 527,000 m<sup>3</sup>



#### Radiological and chemical monitoring

Discharges  
Underground water  
Surface water

#### Capping system monitoring

Water-tightness performances  
Rainfall water distribution  
Membrane sampling  
Topographic measurements

#### Information/Communication

A public report issued every year  
Local Information Commission



Water collected  
under the  
disposal vaults  
21,000 m<sup>3</sup> in 1991  
309 m<sup>3</sup> in 2008

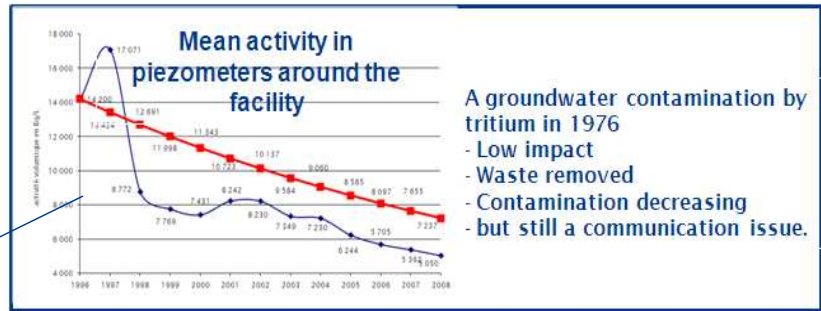


Consolidation of slope

# LIL-SL WASTE: CENTRE DE LA MANCHE DISPOSAL FACILITY

1969: start up 1994: end of operation 2003: institutional control period  
TOWARDS A MORE PASSIVE SAFETY

## Groundwater monitoring boreholes



A groundwater contamination by tritium in 1976  
 - Low impact  
 - Waste removed  
 - Contamination decreasing  
 - but still a communication issue.

→ Impact of the facility  
 ~0,65 µSv/year (2008)

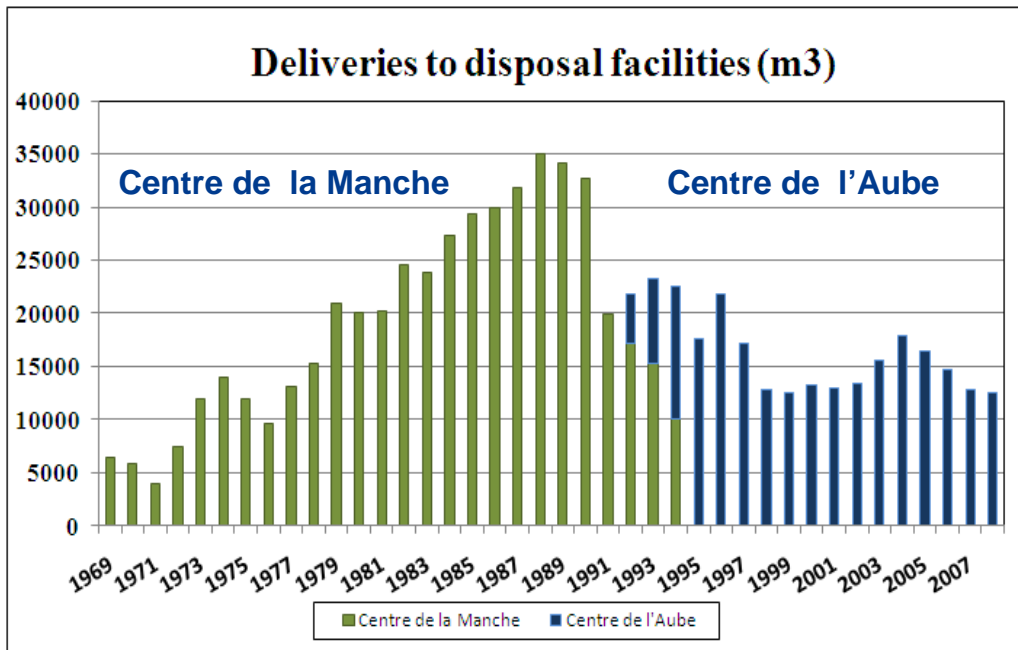
A safety report submitted in January 2009  
 - to improve the capping system  
 - for a more passive long term safety

# LIL-SL WASTE: CENTRE DE L'AUBE DISPOSAL FACILITY

1992: start up By 2040-2050: end of operation  
18th YEAR OF OPERATION

**Disposed volume : 220,000 m<sup>3</sup> (end of 2008)**  
 22 % of the capacity





**... that will facilitate decommissioning waste management**

Comme toute démarche d'un genre nouveau, celle-ci a d'abord nécessité un engagement politique de la part des membres de la CLI, et de son président, ainsi que du représentant des élus locaux, pilote de ce projet, monsieur DALLEMAGNE (Président de la communauté de communes). Mais elle a également impliqué que ce projet soit partagé par l'industriel. L'ouverture des portes du site nucléaire assortie de la possibilité de prélever « au pied » des ouvrages de stockage des déchets, dénote la volonté de la direction de l'ANDRA d'accompagner la CLI dans la construction de sa propre information, et ce malgré une attitude que nous avons ressentie, au départ, comme de la défiance.

Data from ACRO report



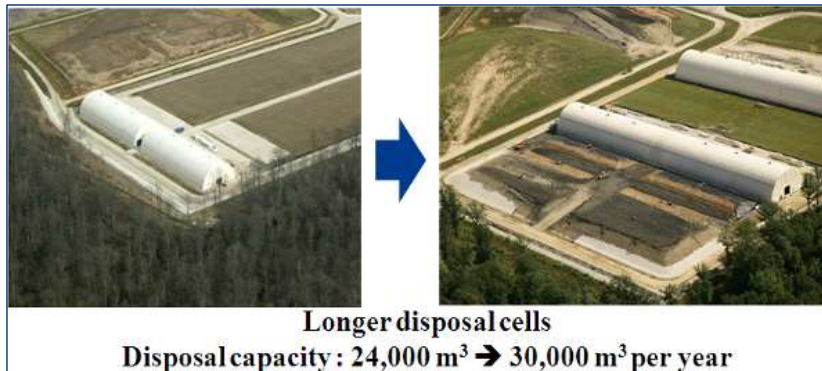
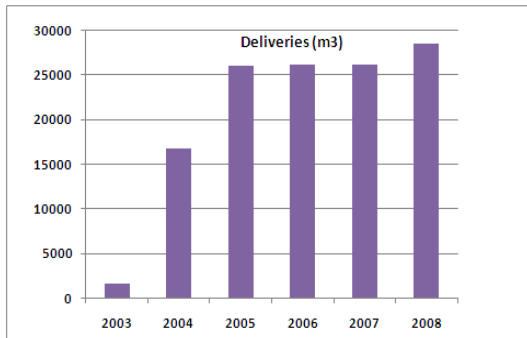
**Impact**  
0,003  $\mu$ Sv/year



**Independent environmental monitoring  
 by the Local Information Commission  
 including measurements inside the facility**

Area : 45 ha  
 Capacity : 650,000 m<sup>3</sup>  
 Start up : October 2003

Disposed volume (end 2008) : ~115,700 m<sup>3</sup>



**➔ But a need to improve density of waste**

**➔ and to recycle nuclear waste within the nuclear industry**





## PUBLIC MISSIONS

The collection of radioactive items

Remediation of polluted sites

Inventory of radioactive waste



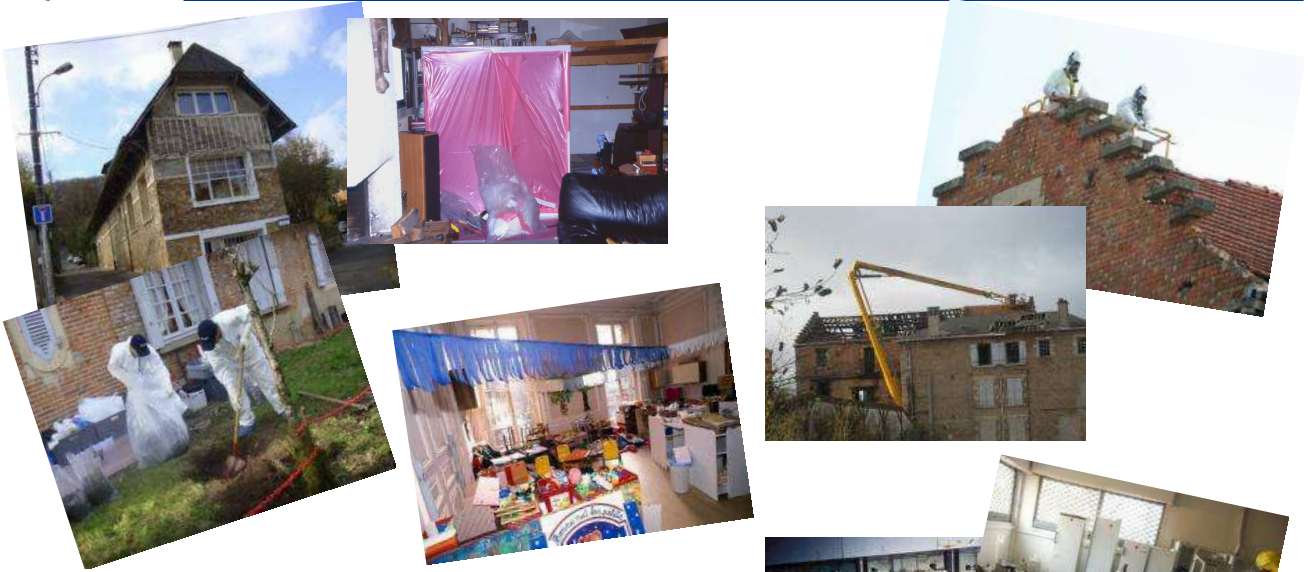
## COLLECTING RADIOACTIVE ITEMS « THAT YOU MAY FIND IN THE ATTIC »

An information booklet sent to all mayors on radioactive items that may be found in houses.

In certain circumstances some items may be collected freely



# REMEDIATION OF POLLUTED SITES WITH RADIOACTIVE MATERIALS A PUBLIC SERVICE DELEGATION



Public fundings : 4.5 M€ in 2009  
A steering committee (CNAR)

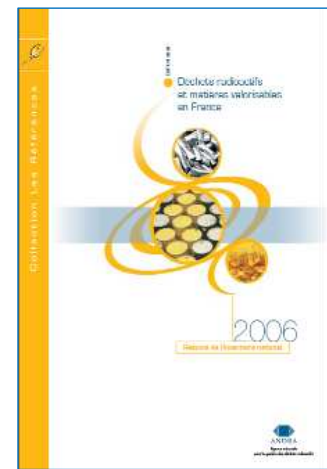
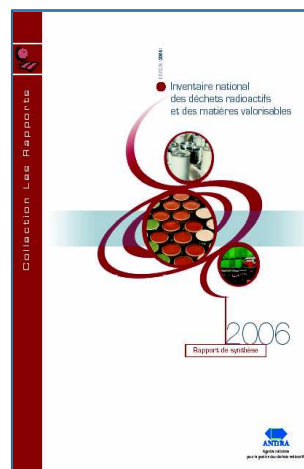
15 sites under investigation or remediation  
13 remediated

# THE NATIONAL INVENTORY A TOOL FOR THE NATIONAL PLAN (PNGMDR)

Description

Location

Existing quantities and arising



Different formats for different publics

[WWW.ANDRA.FR](http://WWW.ANDRA.FR)

## AN UPDATE WILL BE PUBLISHED IN JUNE 2009

