

**PRESENT ISSUES
FOR
CENTRE DE LA MANCHE
DISPOSAL FACILITY**

**M DUTZER, JP VERVIALLE, P CHARTON
ANDRA- FRANCE**

...AND THE FEED BACK TO OPERATED FACILTIES

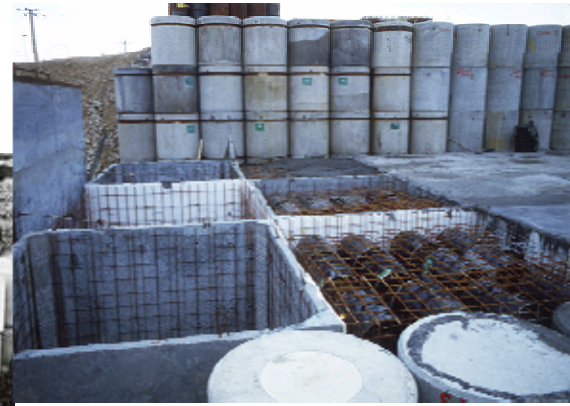
CENTRE DE LA MANCHE DISPOSAL FACILITY

Low and intermediate level short lived waste
Disposed volume : 527,000 m³ of waste packages
Facility area : 15 ha
Operation : 1969-1994
Capping works : 1991-1997
Institutional control period since January 2003



CENTRE DE LA MANCHE OPERATION

Improving the design of a facility



During the 25 years of operation (1969-1994), the design of the vault, requirements on waste packages gradually improved...

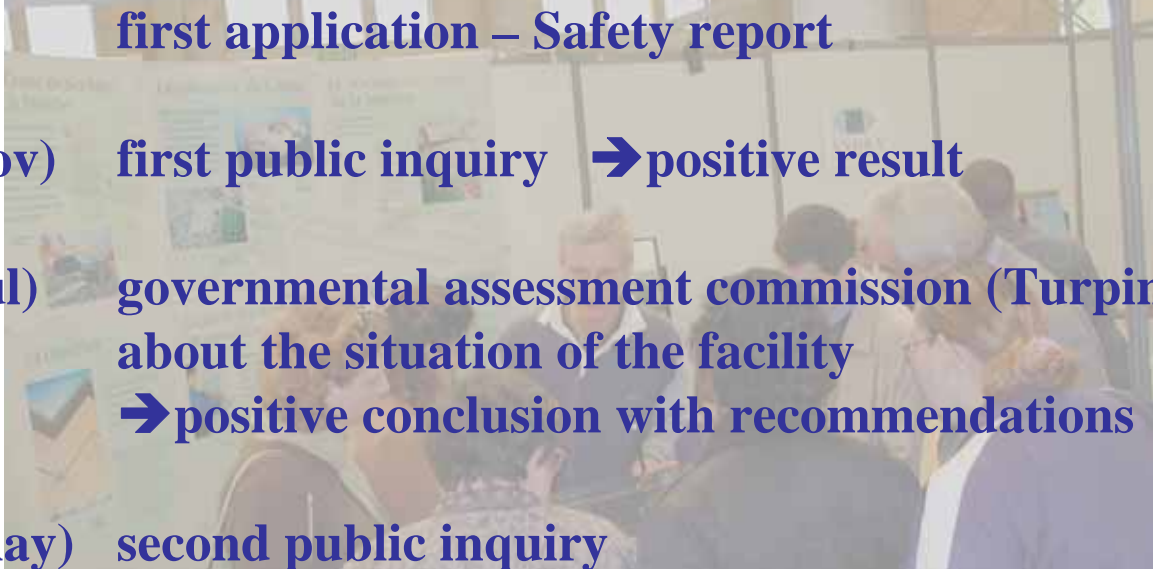
CENTRE DE LA MANCHE CLOSURE

The capping system



... therefore it was decided to implement a bituminous membrane in order to resist to potential settlement of packages

10 YEARS OF LICENSING PROCEDURES TO ENTER THE INSTITUTIONAL CONTROL PERIOD

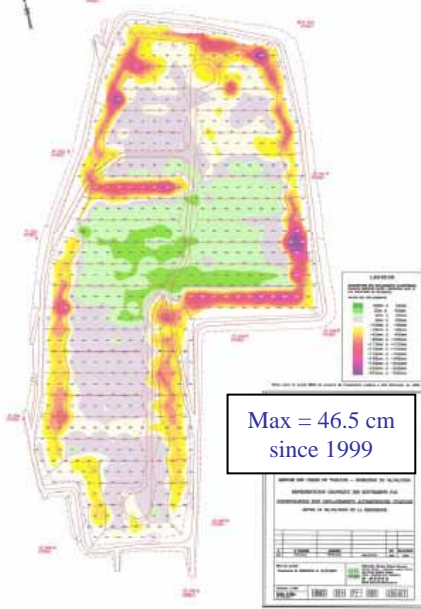
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- 1994** first application – Safety report
 - 1995 (oct-nov)** first public inquiry → positive result
 - 1996 (feb-jul)** governmental assessment commission (Turpin commission) about the situation of the facility
→ positive conclusion with recommendations
 - 2000 (feb-may)** second public inquiry

10th of January 2003

Ministerial order to enter the Institutional control period

CENTRE DE LA MANCHE CAPPING SYSTEM MONITORING

Topographic monitoring



Topographic measurements

Rainfall water balance

Membrane sampling



Effluents collected from vaults	1991	2005
Volume	21,000 m ³	280 m ³
Beta activity (but ³ H)	1.3 GBq	0.008 GBq
³ H activity	1,700 GBq	6.2 GBq
Alpha activity	0.4 GBq	0.003 GBq

CENTRE DE LA MANCHE ENVIRONMENTAL MONITORING



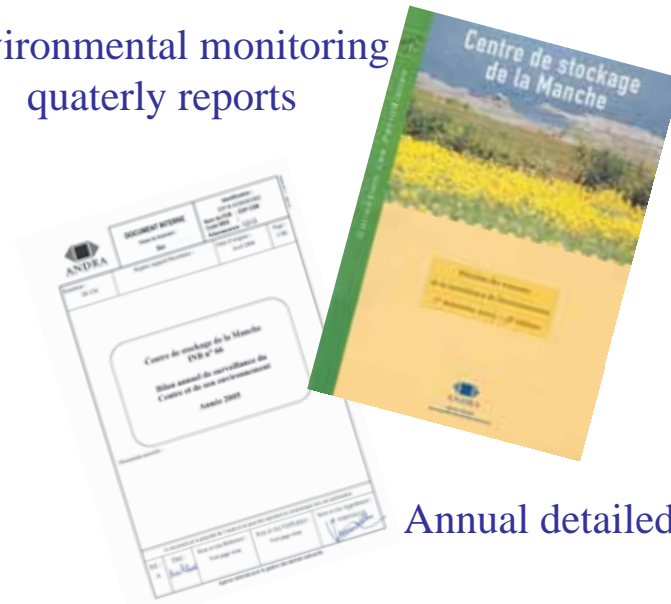
**Impact of the facility
~0.8 μ Sv/year to a critical group**

CENTRE DE LA MANCHE PUBLIC INFORMATION



5000 visitors in 2005

Environmental monitoring
quarterly reports



Annual detailed report



“Open doors” week end



www.andra.fr

CENTRE DE LA MANCHE SURVEILLANCE COMMISSION

Created in 1996

Members : prefect, national elected representatives, mayors, administrations, associations, journalists.

Purpose : surveillance of the facility and information to the public



CENTRE DE LA MANCHE DETAILED MEMORY

Purposes : to maintain information about the facility
to facilitate the understanding of observations
to enable corrective actions

For future generations, to enable decisions about the site

→ *Centre de la Manche* detailed memory

1992 : compilation of information

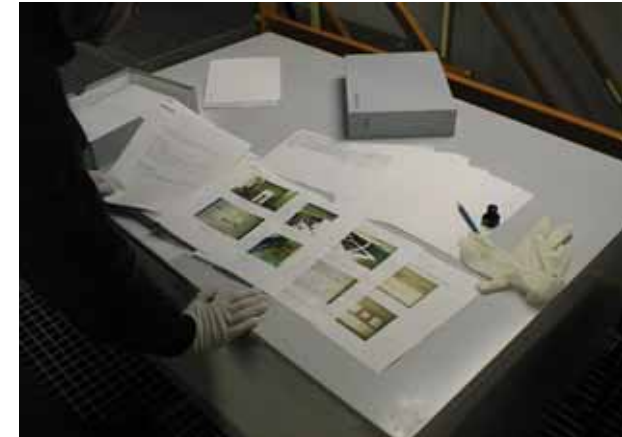
1996 : selection of knowledge (based on safety scenarios)

2000 : duplication on **permanent paper**

2004 : transfer to **French National Archives** (a copy kept by Andra)

10,732 documents → 442,938 pages → 60 meters of storage

Synthesis memory (400 pages) for the Authorities : 1 archive box



Copy of documents on “permanent paper”



Storage of documents at National Archives
in Fontainebleau



CENTRE DE LA MANCHE PRESENT ISSUES

 **to a more passive monitoring**

A step by step approach :

very active → active → passive

Improvement of the capping system ?

the problem of steep slopes
settlement in ancient disposal areas
service life of the membrane

Technical modifications of the facility ?

simplification of water collecting systems
passive operating systems

The review of the environmental monitoring program

Organisation modification

→ A new safety report to be issued in January 2009

THE FEED BACK TO OPERATED FACILTIES

Centre de Soulaines (Aube) disposal facility

Low and intermediate level short lived waste

Area : 95 ha (total)
30 ha (disposal)

Capacity : 1,000,000 m³ waste packages

Start up : 1992

Disposed volume : 182,937 m³
(end of 2005)



Deliveries 2005 : 16,512 m³ - 32,115 packages

Disposal 2005 : 15,114 m³ - 17,522 packages

4 vaults were closed in 2005

77 vaults were closed since start up

110 vaults have been constructed

Centre de Soulaines (Aube) disposal facility Operation includes an acceptance process of waste packages

To get confidence in the ability of the waste generator to produce waste packages complying with waste acceptance criteria

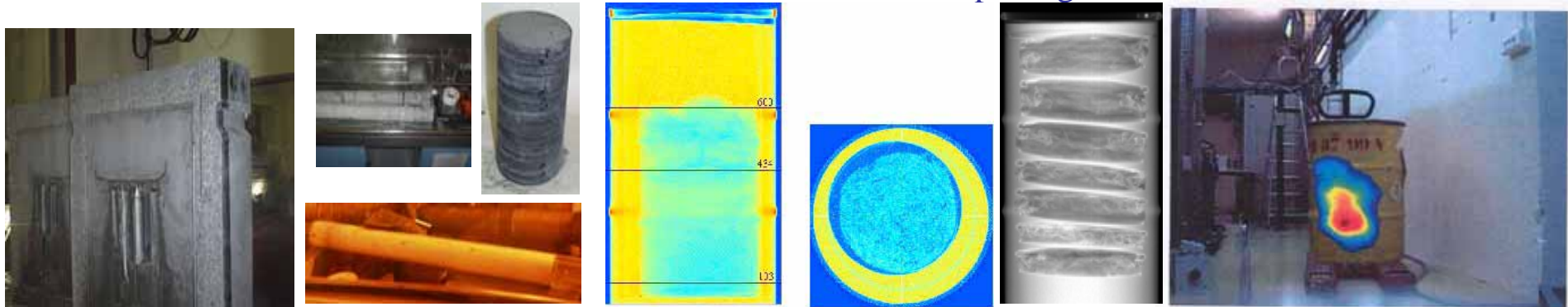
qualification of packages and processes

assessment of Quality Assurance in the generator's facility

To maintain confidence

inspections by Andra in the generators facilities

non destructive and destructive tests on delivered packages



Waste acceptance is also a public acceptance issue

Centre de Soulaines (Aube) disposal facility

Large waste issues



TAKING INTO ACCOUNT *CENTRE DE LA MANCHE* EXPERIENCE **Soulaines disposal facility : the detailed memory**

Building the detailed memory “on line”

A shipment to National Archive every 5 years

First delivery in 2005 : 35 archive boxes



TAKING INTO ACCOUNT *CENTRE DE LA MANCHE* EXPERIENCE **Soulaines disposal facility : The capping system**

Discussions with the regulatory body about the design of the capping system will begin in 2012



Present reference design
Experimental capping model with clay
(start up of measurements in 1995)

Centre de Morvilliers (Aube) disposal facility

Very low level waste

Average activity should be less than 10 bq/g

Area : 45 ha

Capacity : 650,000 m³

First deliveries : October 2003

Deliveries 2005 : 25,000 m³

Disposed volume : 41,500 m³
5 vaults have been closed since start up (september 2006)



Centre de Morvilliers (Aube) disposal facility



Centre de Morvilliers (Aube) disposal facility

Present issues

To have more flexibility

→ longer disposal cells

To increase design flow of packages

To dispose large waste



**The clay capping system will be implemented
above disposal vaults n°1 to 4
in 2007**