



**EURATOM, THE YEAR 2000 AND ITS
IMPACT ON THE REPORTING SYSTEM AND
INSTRUMENTATION**

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Y2K 2 February 1999



YEAR 2000 POTENTIAL PROBLEM AREAS

- ◆ Reporting Systems
- ◆ Headquarters Systems
- ◆ Instrumentation - Installed
- ◆ Instrumentation - Stand alone

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REPORTING SYSTEM

- ◆ Reports to Vienna
 - 8 character format agreed
 - Dates in the accounting records to be agreed with IAEA
- ◆ Reports to Luxembourg
 - 6 character format can be accepted DD MM YY
 - A generic letter to all operators to be sent during this Semester

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HEADQUARTERS SYSTEMS

- ◆ UNIX Servers for the Large Database
 - Operating system not OK.
 - Upgrading or Replacement required
- ◆ Applications
 - CMF2 Nuclear material
 - EMIS Inspection planning/reports
 - ESAM Seal database
 - SICs In house

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HEADQUARTERS SYSTEMS

◆ CMF2

To be checked during a long week-end using artificially changed dates 31/12/99 & 28/2/00

A test director to be used supplied from a company - MERCURY

The programme automatically reviews the log files for error messages.

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HEADQUARTERS SYSTEMS

◆ EMIS Inspection programme

Year 2000 compatible

Oracle tables also compatible

◆ ESAM Seal data base

Year 2000 compatible

Oracle tables also compatible

◆ SICs

Year 2000 compatible

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HEADQUARTERS SYSTEMS

- ◆ NT Servers
Year 2000 compatible
- ◆ NT Workstations
Year 2000 compatible

All will be tested at Easter

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HEADQUARTERS SYSTEMS

- ◆ Small database applications
written by individuals in CLIPPER & ACCESS2
NOT year 2000 compatible
Will need to be rewritten.

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EURATOM EQUIPMENT

- ◆ An internal review of hardware identified the following categories:
 - Operator dependent
 - Branched
 - Installed but independent
 - Stand alone (i.e. portable)

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EURATOM EQUIPMENT

- ◆ An internal review of Software identified the following categories:
 - Operator dependent
 - Independent

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EURATOM EQUIPMENT

- ◆ ACTION undertaken for Hardware:
 - Letters written to equipment suppliers
 - Letters written to Operators where appropriate
 - In house testing of certain equipment.
- ◆ ACTION undertaken for Software
 - As above

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EURATOM EQUIPMENT

- ◆ Portable Gamma equipment

<u>Instrument</u>	<u>No.</u>	<u>Y2K Status</u>
HM4	10	N/A
Pu Meter	11	Upgrade
Davidson	25	N/A
TSA	2	N/A
MiniMCA	40 + (20)	OK
EM1	(25)	OK
Gamma Taucher	6	OK
Enrichment Meter	2	Not OK

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EURATOM EQUIPMENT

◆ Portable Neutron Equipment

<u>Instrument</u>	<u>No.</u>	<u>Y2K Status</u>
AWCC	5	Not OK *
HLNCC	16	Not OK *
NCC	11	Not OK *
PHONID	4	OK
UFBR	4	Not OK *
INVS	5	Not OK *
Pin Counter	4	Not OK *
FORK	12	Not OK **

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EURATOM EQUIPMENT

◆ Installed with unattended data acquisition

<u>Instrument</u>	<u>No.</u>	<u>Y2K status</u>
Neutron coincidence + gamma	11 (+6)	Upgrading
Neutron monitors	40 (+10)	OK
Spent fuel monitoring	13 (+2)	Upgrading
Combined rad. & surveillance	1 (+1)	OK
Remote seal readout	1 (+1)	OK

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EURATOM EQUIPMENT

◆ C/S Equipment

<u>Instrument</u>	<u>No.</u>	<u>Y2K Status</u>
GEMINI	43	Not OK*
EMOSS - 1	39	OK
EMOSS - 8	25	OK
MOS	4	OK
DSOS	12	OK
ALIS	15	OK
UnIplex/Digiquad	58	OK
VACOSS	200	Check Version

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EURATOM EQUIPMENT

◆ Other Equipment

<u>Instrument</u>	<u>No.</u>	<u>Y2K Status</u>
CVD	13	N/A
Hybrid K-edge	3	OK
Compact K- edge	2	OK
OSL Equipment	5	OK
LSS Equipment	7	OK

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EURATOM EQUIPMENT

◆ Response

- A lot of equipment meets the year 2000
(date & time embedded in)
- Certain suppliers provided certificates
- Some equipment covered by maintenance contracts
- Specific hardware & software upgrades required
(contracts placed)

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EURATOM EQUIPMENT

◆ Specific Problem Areas

- Data Acquisition Programmes
 - A programme of upgrading
 - DOS - WINDOWS 3.1 - WINDOWS NT to
accommodate the 32 bit operating system
- (Not a question of updating year 2000)

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EURATOM EQUIPMENT

◆ Specific Problem Areas

- JSR 12
 - Mechanical fix
- GEMINI
 - Mechanical fix

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CONCLUSIONS

- ◆ Reporting System
 - Y2k Compatible
- ◆ Headquarters Systems
 - Y2K Compatible after upgrading
 - (small individual applications need to be rewritten)
- ◆ Instrumentation
 - Problem areas identified
 - Upgrading programme for 1999

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