
MEXICO STATUS REPORT
2001-2002
LAGUNA VERDE NPP
U1 & U2



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- *ISOE*
 - *2002 STEERING COMMITTEE MEETING*
 - *PARIS, OCTOBER 2002*

2001 Collective Dose (Person-Sievert)

• UNIT 1:	
NORMAL OPERATIONS:	0.74
8th REFUELING OUTAGE:	<u>3.23</u>
TOTAL :	3.97
• UNIT 2	
NORMAL OPERATIONS:	0.44
5th REFUELING OUTAGE	<u>2.16</u>
	2.60
• AVERAGE UI & U2:	3.29

2001 Main Events Influencing Dose

- A year with outages in both Units, that included:
 - Reactor vessel nozzles In Service Inspections
 - Installation of new condensate chambers (reactor instrumentation)
 - Major modifications to RHR System
 - CRDs change/maintenance
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Major Evolutions: Source Term Reduction Strategy. Followup

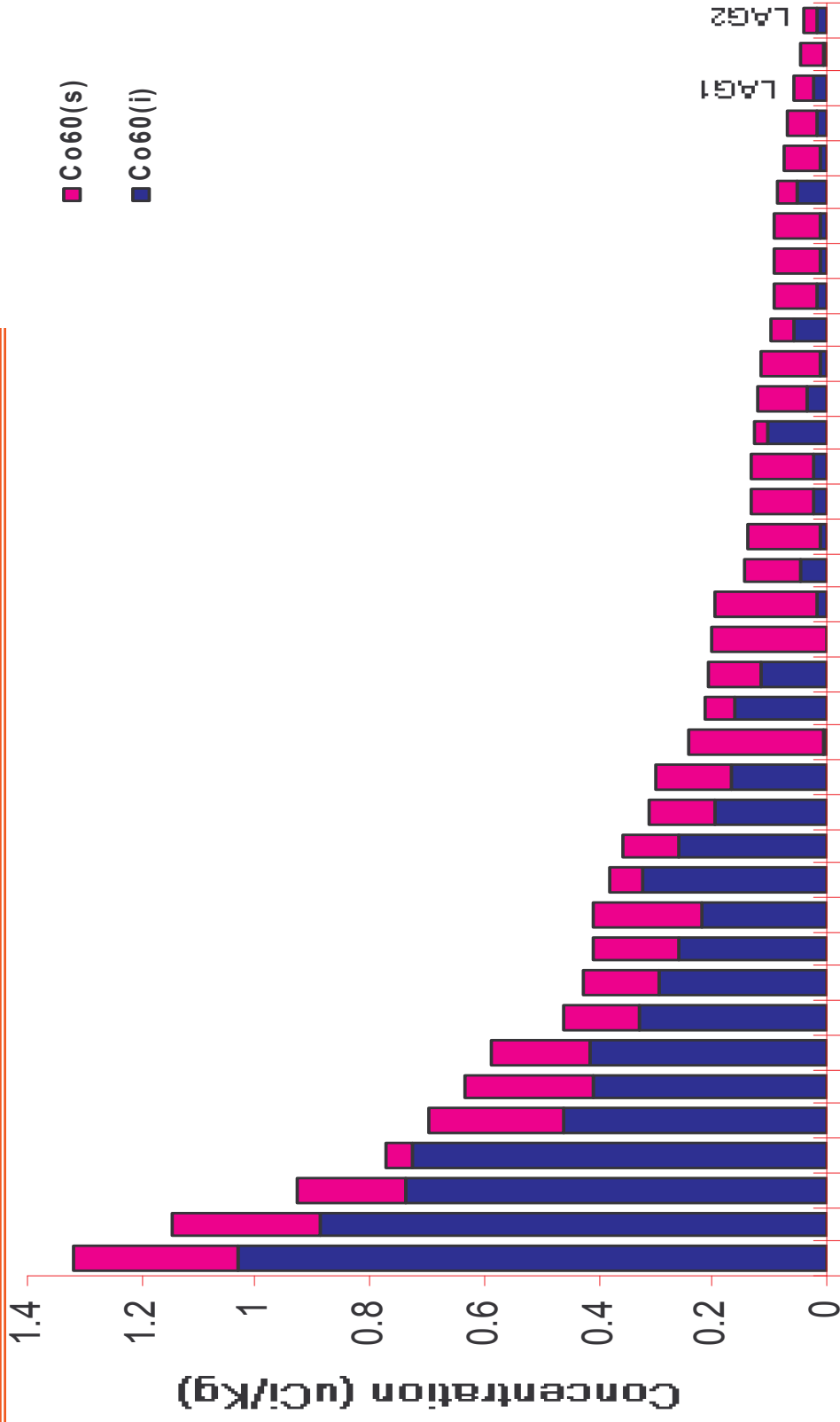
- Started 1998:
 - Zinc injection
 - Installation of mechanical filters downstream main condenser (in addition to the already existing ion exchange system).
 - Chemical decontaminations (mainly RRC)
 - Investigation and correction of the main sources of excess of Fe contribution to reactor feedwater.
 - Physical extraction (vacuuming/filtering) of loose Fe oxides from reactor vessel (U2).
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Major Evolutions: Source Term Reduction Strategy. Results

- Main contributors to Collective Dose:
 - Co-60
 - Mn-54
 - Total Iron (crud main “body” and Co/Mn carrier)
 - More than 90% of our collective dose is due to these factors.
 - The source term reduction efforts resulted in an effective control of these factors.
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2001 GE-BWR Reactor Water Mean Values

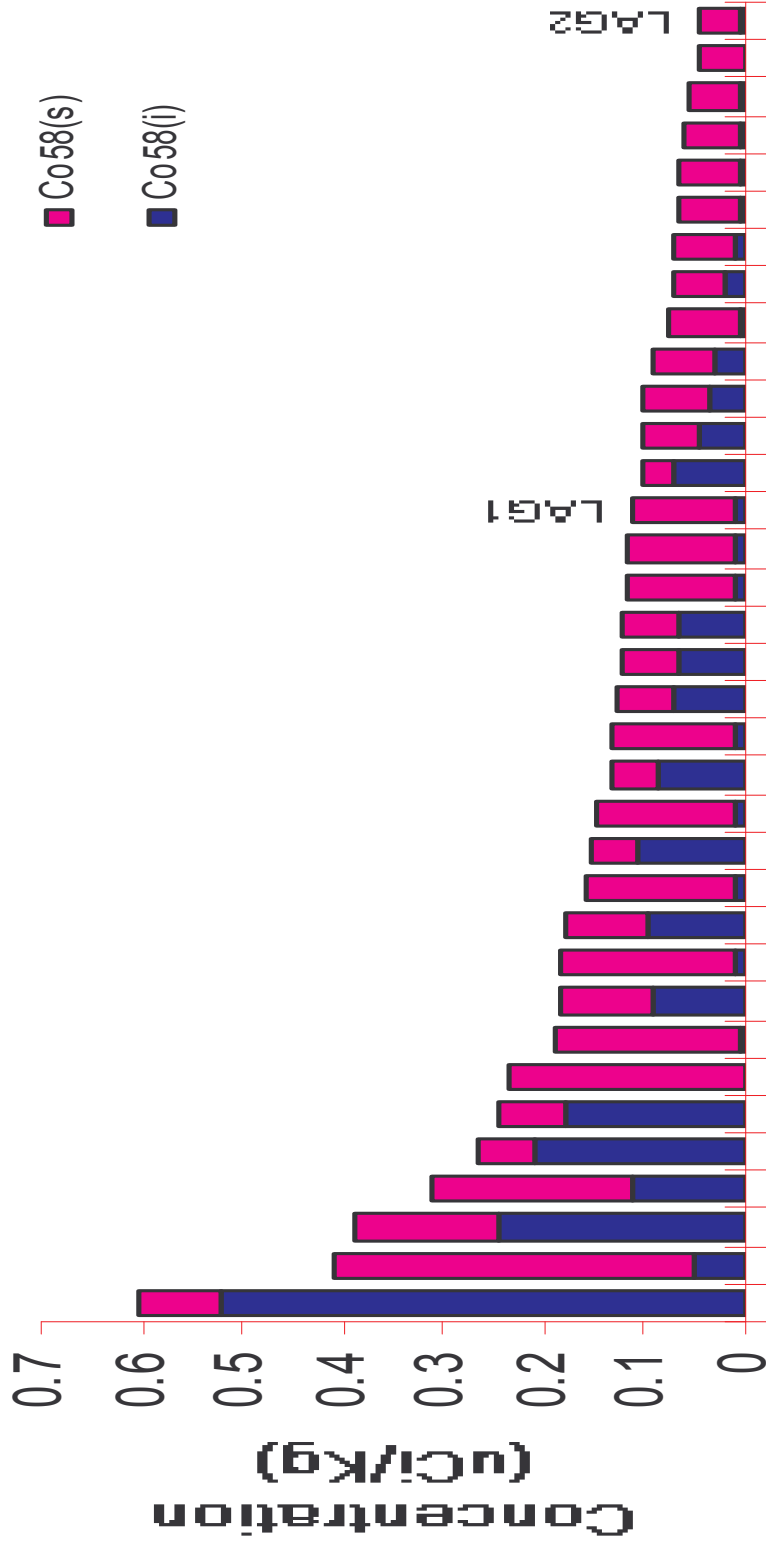
Co-60



PLANT IDENTIFICATION

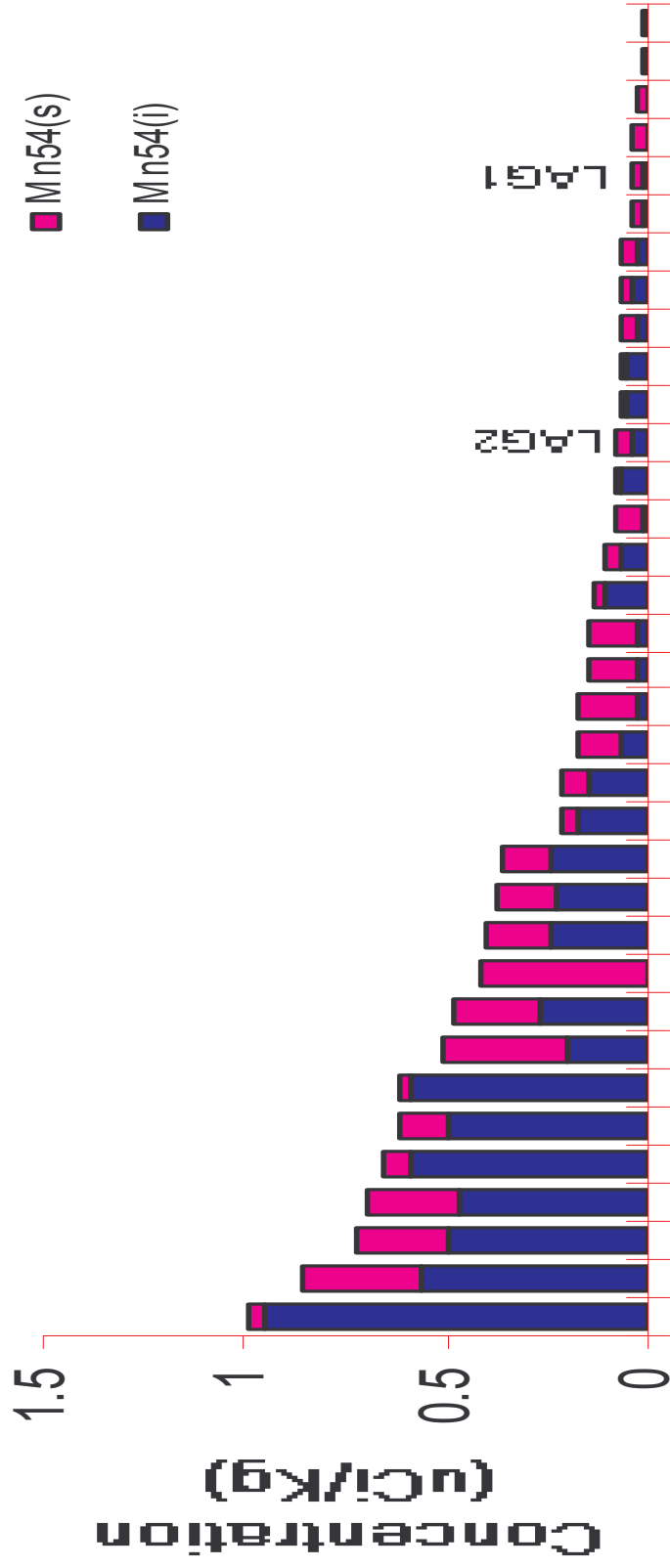
2001 GE-BWR Reactor Water Mean Values

Co-58



2001 GE-BWR Reactor Water Mean Values

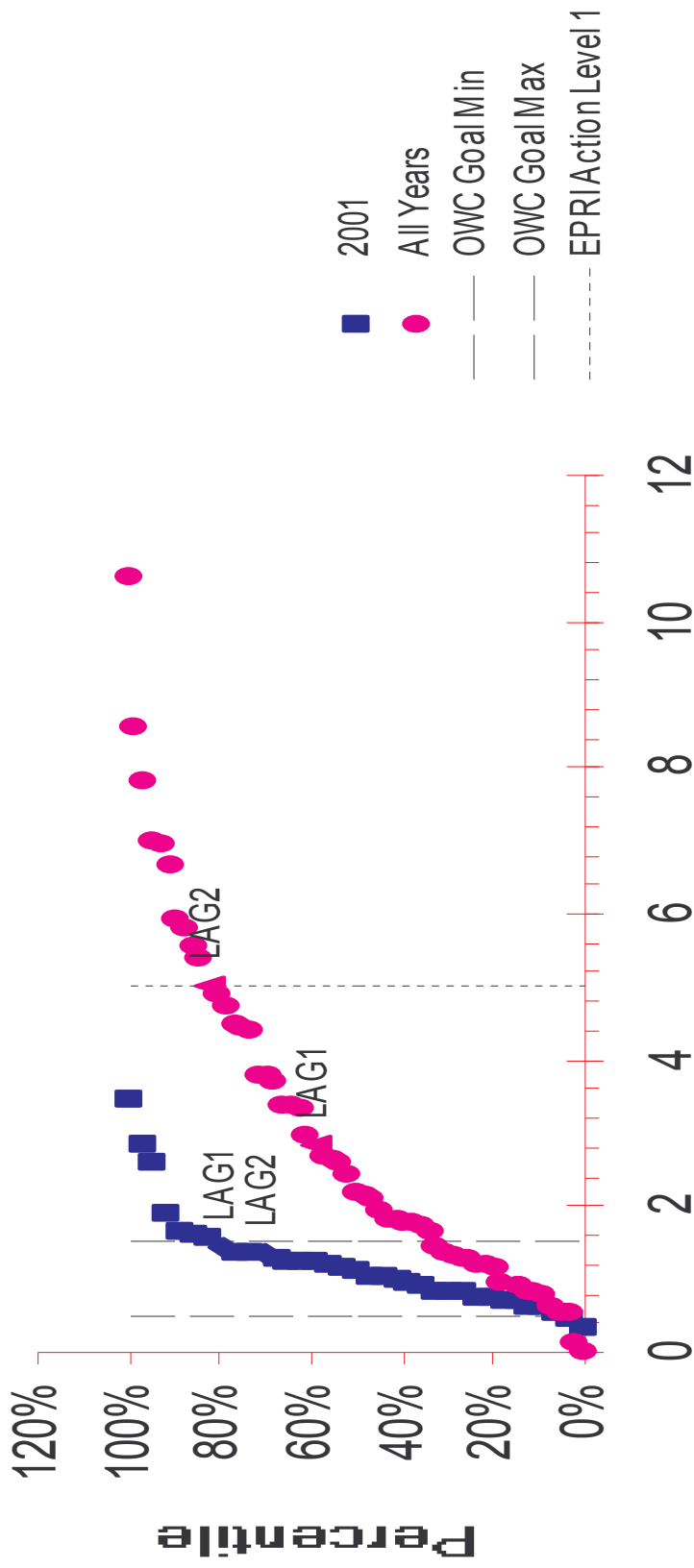
Mn-54



PLANT IDENTIFICATION

BWR GE Fleet Feed Water Mean Values

Total Fe

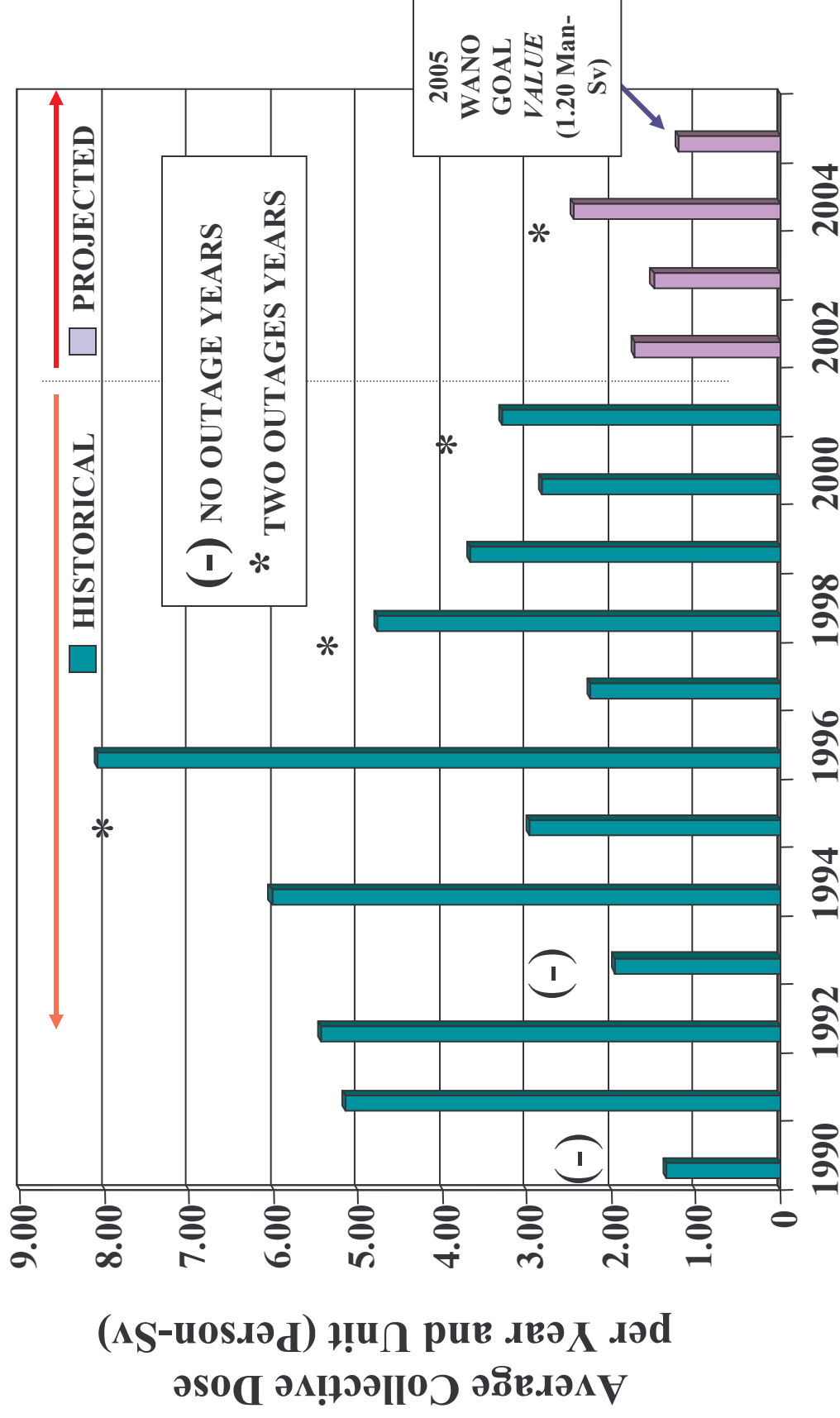


Total Iron (ppb)

Expectations

- With Co and Mn in good values and Fe under control, a better radiological future is expected.
 - At the present, some old crud settled on reactor vessel and primary coolant loop surfaces is still significantly contributing to dose.
 - Additional strategies have been adopted, based on better ALARA planning, safety culture enhancement, additional mockup training, use of remote devices.
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Laguna Verde NPP: Avg. Collective Dose History and Trends



Recent evolutions (October 2002)

- During U1 current refueling outage, an inspection revealed indications of IGSCC on six out of the 20 jet pumps upper beams of U1 (10 years old).
 - As a conservative measure, all 20 Jet pumps upper beams will be replaced. It will take ten days.
 - Contact dose rates of removed beams are expected in the order of 500 mGy/h. Expected collective dose 20 man-mSv. Mostly remote work.
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