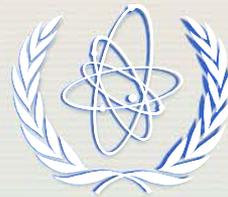


The OSART programme and radiation safety related findings during recent OSART missions

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ISOE ALARA Symposium

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IAEA

International Atomic Energy Agency

OSART PROGRAMME - History

ACTIVITIES 1983 – 2009 October

□ 153 missions: 99 sites; 32 countries

- 110 OSART missions to operational plants
- 20 OSART missions to plants under construction/commissioning
- 7 safety review missions
- 10 technical exchange missions
- 6 expert missions

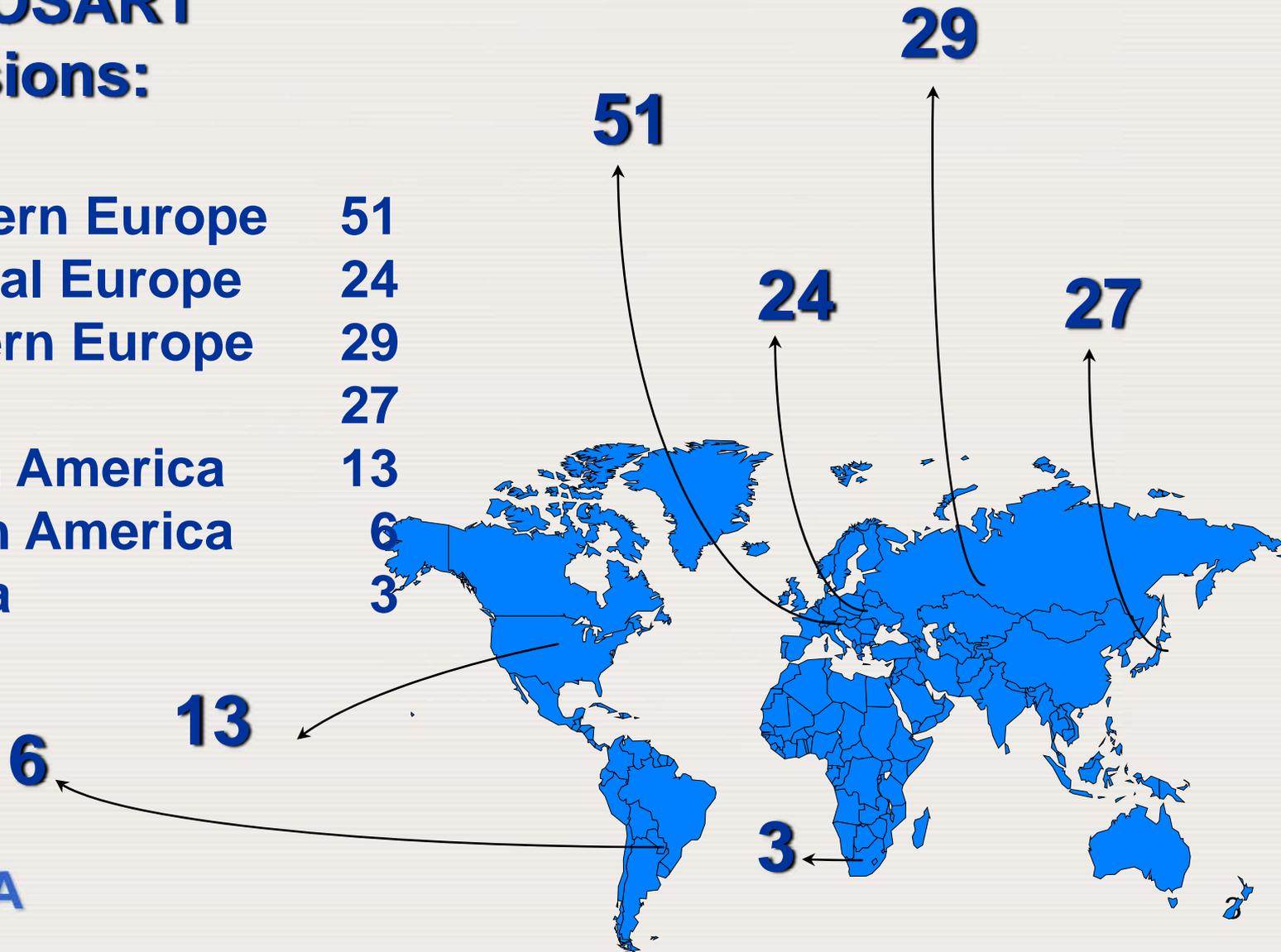
□ 93 follow-up visits (started in 1989)

□ Technical assistance, including OSART seminars

OSART missions 1983-2009 October

153 OSART missions:

Western Europe	51
Central Europe	24
Eastern Europe	29
Asia	27
North America	13
South America	6
Africa	3



OSART missions in 2007

- Loviisa Finland
- Yonggwang Korea
- Tihange Belgium
- Neckarwestheim Germany
- Khmel'nitsky Ukraine
- Chinon France

OSART missions in 2008

- Forsmark Sweden
- Balakovo Russia
- Arkansas Nuclear One USA
- Cruas France
- Rivne 3&4 Ukraine

OSARTs in 2009

- Mihama, Japan
- Oskarshamn, Sweden
- Fessenheim, France
- *Vandellos*, Spain
- *South-Ukraine*, (*Limited scope*) Ukraine
- *Ling Ao*, (*Pre-operational*) China

SS used to review RP area in OSART

- Safety Series No.115; International Basic Safety Standards for Protection Against Ionizing Radiation and for the Safety of Radiation Sources
- NS-G-2.7: Radiation Protection and Radioactive Waste Management in the Operation of Nuclear Power Plants (Safety Guide)
- WS-G-6.1; Storage of Radioactive Waste (Safety Guide)

OSART mission results in RP area

- Summary results of 15 missions in 10 countries
 - Belgium, Finland, France, Germany, Japan, Korea, Russia, Sweden, Ukraine, USA
- Radiation work control: 3 R, 8 S
- Control of occupational exposure: 1 R, 1 S
- RP instrumentation, protective clothing and facilities: 1 R, 5 S
- Radioactive waste management: 1 S

Radiation work control 1/2

- Measures to prevent spread of contamination inside RCA are not sufficiently comprehensive
- A radioactive contamination spot was found outside of the RCA; this spot had not been identified by the existing radiation survey programme

Radiation work control 2/2

- The protective painted coating of the floors of the corridors of the RCA is damaged at several places; the plant has no specific surveillance and repair programme to deal with these defects in a timely and prioritised manner
- The counting chemistry laboratories for radioactive process samples are not adequately classified

Control of occupational exposure

- Arrangements to effectively set goals to reduce exposures and collective doses during normal plant operation are not optimized
- Personal dose records do not contain dose commitment data calculated from internal exposure and separate records for neutron dose; the records are not protected efficiently against loss

RP instrumentation 1/2

- Equipment for monitoring persons at exits from RCA does not satisfactorily meet requirements on sensitivity for the low energy beta fields and calibration of the monitors is performed by radiation source with the energy of beta irradiation that is higher than it is relevant to the plant

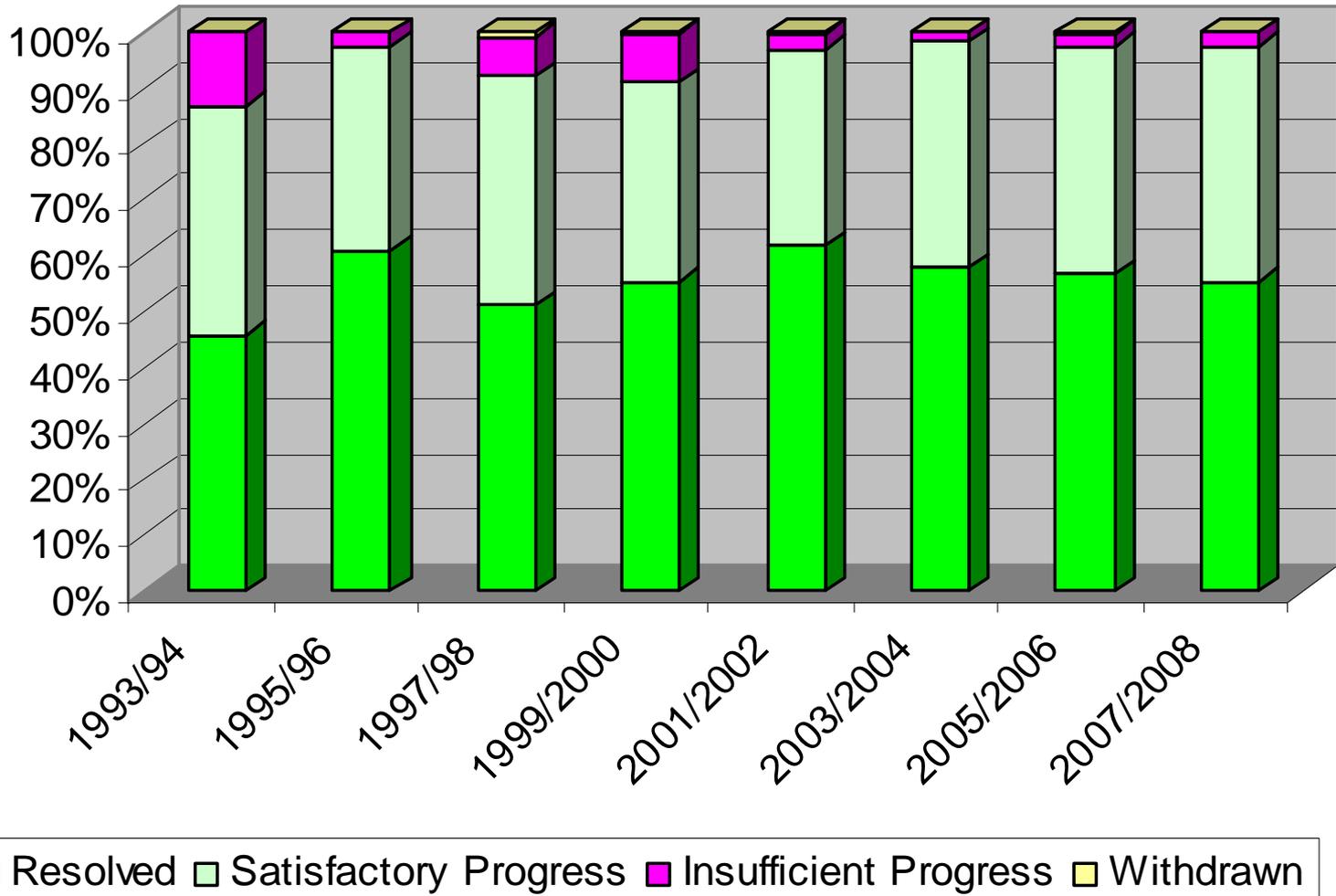
RP instrumentation 2/2

- The contamination monitoring instrumentation, used at the plant, does not provide sufficient personnel contamination monitoring due to detection limitations and the location of the plant monitoring instruments

Radioactive waste management

- Instructions on waste sorting at the source are not satisfactory developed and implemented

OSART Issue Resolution in Follow-up Visits



OSARTs planned in 2010-2011

- Ringhals, Sweden 2010 March
- Doel, Belgium 2010 March
- St Alban, France 2010 Sept-Oct
- Bohunice, Slovakia 2010 November
- Bushehr, Iran 2010
- Metzamor, Armenia 2011
- Cattenom, France 2011
- Dukovany, Czech R. 2011
- Smolensk, Russia 2011
- Seabrook, USA 2011
- Koeberg, South-Africa 2011

Feedback to Improve the OSART Programme

- Feedback questionnaire from each expert and plant
- Self-assessment seminars (in-house) bi-annually
- Technical Meetings with past and future OSART 'clients' to improve effectiveness of the service: 2003 and 2007; scheduled for 2010

Recent Improvements in OSART Methodology and Documentation

- Short, more focused report format not containing any neutral or descriptive parts
- Self-training before the mission with interactive CD
- OSART guidelines and several IAEA Safety Standards translated into Russian
- OSART Corporate Review process being developed
- NS-G-2.14: Conduct of Operation in NPPs issued
- DS388: Chemistry Control in Operation of NPPs

Customized OSART review scope

- Core areas: MOA, OP, MA, TS, OE, RP
- Available optional areas: TQ, CH, EPP, COM
- New optional areas in development:
 - Long Term Operation
 - Transition from Operations to Decommissioning
 - PSA Applications
 - Accident Management

Thank you for your attention!