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CENTRE D'ÉTUDE SUR L'ÉVALUATION DE LA PROTECTION DANS LE DOMAINE NUCLÉAIRE

Update on ISOE website

www.isoe-network.net

Caroline Schieber

2011 ISOE NATC ALARA Symposium

& EPRI Radiation Protection Conference

Weston, January 10-12, 2011

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Welcome to the ISOE Website




The Information System on Occupational Exposure (ISOE) System was created in 1992 to ***provide a forum for radiation protection professionals*** *from nuclear electricity utilities and national regulatory authorities worldwide* ***to share dose reduction information, operational experience and information to improve the optimisation of radiological protection at nuclear power plants****.*

ISOE is jointly sponsored by the OECD Nuclear Energy Agency and the International Atomic Energy Agency

Next ISOE Meetings

- **Working Group on Data Analysis**
  24-26 May 2011, OECD/NEA, Paris, France
  7-8 November 2011, OECD/NEA, Paris, France
- **ISOE Bureau**
  23 May 2011, OECD/NEA, Paris, France
  8 November 2011 (afternoon), OECD/NEA, Paris, France
- **ISOE Management Board**
  9-10 November 2011, OECD/NEA, Paris, France

Upcoming Events

- **2011 ISOE North-American Symposium**
  10-12 January 2011, Fort Lauderdale, USA

ISOE Members Login

Hi Caroline SCHIEBER,

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- To request an account
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What's new?

- Documents
- RP Forum

United States of America

Participating Utilities	Operating Reactors	Shutdown Reactors
American Electric Power Co., Inc. website	D.C. Cook 1, 2	
Constellation Energy Group, Inc. website	Calvert Cliffs 1, 2 Ginna Nine Mile Point 1, 2	
Exelon Corporation website	Braidwood 1, 2 Byron 1, 2 Clinton 1 Dresden 2, 3 LaSalle County 1, 2 Limerick 1, 2 Oyster Creek 1 Peach Bottom 2, 3 Quad Cities 1, 2 Three Mile Island 1	Dresden 1 Peach Bottom 1 Zion 1, 2
First Energy Corporation website	Beaver Valley 1, 2 Davis Besse 1 Perry 1	
Florida Power and Light Co. website	Duane Arnold 1 Point Beach 1, 2 Seabrook Saint-Lucie 1, 2 Turkey Point 3, 4	
PPL Susquehanna, LLC website	Susquehanna 1, 2	
South Carolina Electric & Gas Co. website	Virgil C. Summer 1	
Southern Nuclear Operating Co. website	Vogtle 1, 2	
Tennessee Valley Authority (TVA) website	Browns Ferry 1, 2, 3 Sequoyah 1, 2 Watts Bar 1	
Xcel Energy, Inc. website	Monticello	

Last documents posted on the ISOE website

Last Updated on Thursday, 02 December 2010 16:42

Symposium

- 2010 ISOE International Symposium Proceedings
  Cambridge (UK), 17-19 November 2010
- 2010 ISOE Asian Symposium Proceedings
  Gyeongju (Repulic of Korea), 30-31 August 2010
- 2010 ISOE North-American Symposium Proceedings
  Fort Lauderdale (USA), 11-13 January 2010

Publications

- L'organisation du travail pour optimiser la radioprotection professionnelle dans les centrales nucléaires (translation of the 2009 Work Management book in French)
- ISOE Annual Report - 2008
- ETC Information Sheets No. 51, 52

Management documents

- Working Group on Data Analysis
  13-15 September 2010, Paris, France
- 20th Meeting of the ISOE Management Board
  15 November 2010, Cambridge, France

RP Library

- RP Experience Reports: 2009 Cook NPP Dose Reduction 5 Year Plan
  Restricted distribution to **ISOE Member only**
- RP Experience Reports: Tri-Nuc Model UF-600 Operating Guidelines
  Restricted distribution to **Utilities only**
- ETC Benchmarking Report: Cook NPP (USA)
  Restricted distribution to **Utilities only**
- ALARA Tools: EDF Guidance Report on RP activities follow-up
  Public distribution

Proceedings of the ISOE Symposia

Year	Symposium Location
2010	• Cambridge, United Kingdom • Gyeongju, Republic of Korea • Fort Lauderdale, USA
2009	• Vienna, Austria • Aomori, Japan • Fort Lauderdale, USA
2008	• Tsuruga, Japan • Turku, Finland
2007	• Fort Lauderdale, USA • Seoul, Republic of Korea
2006	• Essen, Germany • Yuzawa, Japan
2005	• Fort Lauderdale, USA • Hamaoka, Japan
2004	• Lyon, France
2003	• Orlando, USA
2002	• Portoroz, Slovenia
2001	• Anaheim, USA
2000	• Tarragona, Spain
1999	• Orlando, USA
1998	• Malmö, Sweden
1997	• Orlando (USA)

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ISOE Publications

- ISOE News
- ISOE Annual Reports
- Information Sheets
- Working Group Reports
- RP Documents not restricted to ISOE Members

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RP Documents not restricted to ISOE Members

Type of document	Name of Document
Benchmarking Reports	Braidwood (2009) Sizewell B (2004)
ALARA Tools > *Guidance Reports* > *EDF*	EDF Guidance Report on RP activities follow-up EDF Optimisation Guidance Report
Training Documents	The Optimisation of Radiation Protection

Webmaster

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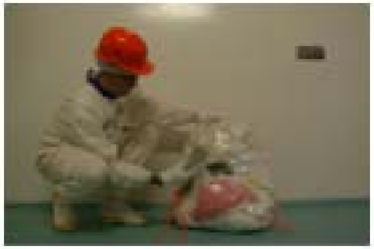
RP Contact-Persons

- ISOE Bureau
- National Coordinators
- Radiological Protection Managers
- Authorities



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Radiation Protection Library

- Benchmarking Visit Reports
- Radiation Protection Experience Reports (Outage reports, Specific maintenance job reports, Dose Reduction Programs, Good Practices, Others)
- ISOE 3 Reports
- ALARA Tools (Alpha value documents, ALARA Posters, Guidance Reports)
- Training documents
- TC Analyses


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Welcome to the ISOE Database

ISOE DATABASE

(You will be asked to re-enter your ISOE username and password)

The ISOE database includes occupational exposure information for ***401 operating units and 81 units in cold-shutdown*** *or s*
decommissioning in ***29 countries****, covering about* ***91% of the world's operating commercial power reactors.***

To find an analysis of the Completeness of the ISOE Database for the data used in the MADRAS Analyses, click here.

2009 Data for operational reactors available in the current database (as of 31 December 2010)

Armenia *(complete)*	**Finland** *(complete)*	**Netherlands** *(complete)*	**South Africa** *(complete)*
Belgium *(all questionnaires missing)*	**France** *(complete)*	**Pakistan** *(all questionnaires missing)*	**Spain** *(complete)*
Brazil *(complete)*	**Germany** *(1 NPP missing)*	**Rep. of Korea** *(complete)*	**Sweden** *(complete)*
Bulgaria *(complete)*	**Hungary** *(complete)*	**Romania** *(complete)*	**Switzerland** *(all quest. under validation)*
Canada *(12 quest. under validation)*	**Japan** *(complete)*	**Russian Federation** *(complete)*	**Ukraine** *(all questionnaires missing)*
China *(complete)*	**Lithuania** *(complete)*	**Slovak Rep.** *(complete)*	**United Kingdom** *(complete)*
Czech Rep. *(complete)*	**Mexico** *(complete)*	**Slovenia** *(complete)*	**USA** *(21 quest. under validation)*

Language: en [schieber] Caroline SCHIEBER LOG-OUT

ISOE

ISOE 1 Questionnaires

- Database
- Extract

Statistics

- MADRAS
- Completeness

Contact

ISOE > **Home**

Welcome to the ISOE Database

Accessing the database:

- if you are an **utility**: you have access to the full set of information stored in the database
- if you are an **authority**: you have access to all the data from your country (complete questionnaire) AND only to the general data for the reactors outside your country (for ex. annual collective dose).

Data entry formats

Data entry formats are based on the language that you have chosen (see language bar on top).

Format used for dates: 1/31/2011
Format used for numbers: 16,300.378

NOTE: if you experience problems accessing the database, please send a note to the Website Administrator stating the problem and any details on your specific operating environment.

A. GENERAL INFORMATION

Name of reactor unit:	**Salem 2**	Year:	**2009**
Type of reactor:	PWR	Status of reactor:	Operational
Sister group	W41		
Installed Gross power:	1158 MWe	Since (date):	10/1/1981

Units of measurement to be used in questionnaire:	
for collective dose:	man.mSv
for individual dose:	mSv
for dose rate:	mSv/h

Contact-person for further information on this questionnaire:	Ron Trentham
Telephone:	352 795-6486 x 3012
Cellphone:	
Telefax:	352 563-4493
Email:	Ron.Trentham@pgnmail.com

Gross electrical output for the year:	7725.16 GWh
Operating cycle number going on at end of year: (If refuelling outage at the end of the year, please indicate the previous operating cycle number)	17

EXTERNAL DOSIMETRY SYSTEMS USED AND RECORDING LEVEL:	System:	Recording level (mSv):
table B, normal operation:	Electronic Direct Reading Dosimeter	0.010
table B, shutdowns:	Electronic Direct Reading Dosimeter	0.010
table C, number of individuals receiving measurable dose:	Thermoluminescence dosimeter (TLD)	0.100
table D, individual dose distributions:	Thermoluminescence dosimeter (TLD)	0.100
table E/F, job/system/department doses:	Direct Reading Dosimeter (pen dosimeter)	0.010
Neutron dosimetry:	Thermoluminescence dosimeter (TLD)	0.100
Table B, total annual dose:	Thermoluminescence dosimeter (TLD)	0.100

INTERNAL DOSIMETRY SYSTEMS USED AND RECORDING LEVEL:	System:	Recording level (Bq):
Plant personnel:	Whole body counting	134
Outside personnel:	Whole body counting	134

A: General information

B. ANNUAL DOSE STATISTICS FOR THE UNIT

Normal operation

Calendar period		Collective dose (man.mSv)			Total
Start	End	Plant personnel	Outside personnel	No breakdown	
1/1/2009	12/31/2009			31.450	31.450
	Total:			31.450	31.450

Planned outage (Days of planned outages: 30)

10/13/2009	11/11/2009			938.020	938.020
	Total:			938.020	938.020

Outage RWP man.hours	62,063.00

Forced outage (Days of forced outages: 5)

1/1/2009	1/5/2009			17.270	17.270
	Total:			17.270	17.270

TOTAL ANNUAL DOSE:			986.740	986.740

Total RWP man.hours	

E. DOSE BY SYSTEM OR BY JOB FOR THE UNIT CONCERNED BY THIS QUESTIONNAIRE

SYSTEM OR JOB: **Steam generator - primary side**

Data for: Refuelling outage

X: Check this box if the doses reported here include services' dos

1 - Tasks	Reason for work	No. of SG maintained	Duration (man-hours)	Collective dose (man.mSv)			Number of individuals			Comments	X
				Plant personnel	Outside personnel	No breakdown	Plant personnel	Outside personnel	No breakdown		
Eddy current testing	Inspection	2	716.00			3,398.000					
Manways, handholes, flanges	Maintenance	2	280.00			15.840					
Other	Maintenance	2	170.00			15.520				nozzle dam & bowl	
Plugging	Repairs	2	127.00			88.000					
Preparation	Maintenance	2	1,682.00			18.590					
Total			2,975.00			3,535.950					

E: Dose by job, task and sub-task (Steam generator - primary side)

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Analyses

ANNUAL COLLECTIVE DOSE

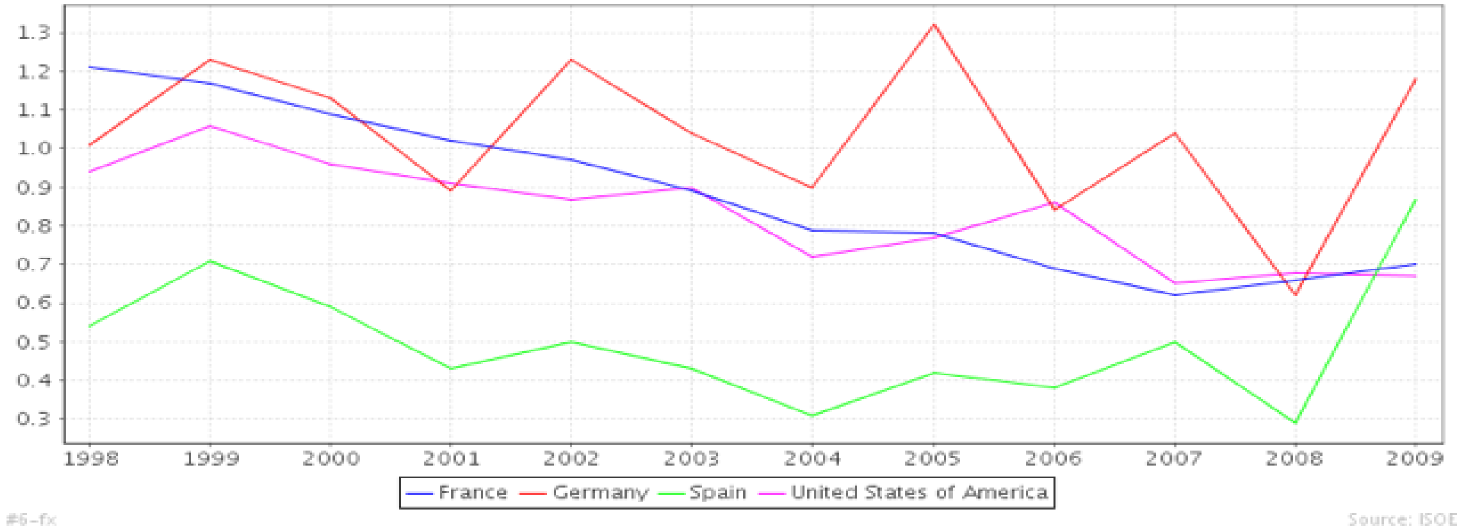
- **Total annual collective dose**
  - For a plant unit
    - Compared to other units (#U-01)
    - Compared to its sister unit group and other sister unit groups (#U-02)
    - Compared to its sister unit group and its reactor type (#U-05)
    - Compared to countries (#U-14)
    - Compared to other units in its sister unit group (#U-20)
  - For the whole database
    - By geographical region (#4-f3)
    - By reactor type (#4-f4)
    - Breakdown by geographical region for 1 year (#4-f5)
    - Breakdown by reactor type for 1 year (#4-f6)
- **Cumulated total annual collective dose**
  - For the whole database
    - By geographical region (#4-f1)
- **Average annual collective dose per reactor**
  - For a country
    - Compared to other countries for 1 reactor type (#6-fx)
    - Compared to other countries for all reactor types (#U-19)
  - For a geographical region
    - By reactor type (#6-fj)
  - For the whole database
    - By geographical region (#6-f1)
    - By reactor type (#6-f2)
    - By geographical region and by reactor type for 1 year (#6-t1)
    - By country and by reactor type for 1 year (#6-t2)
- **Rolling average collective dose**
  - For a plant unit
    - Compared to other units (#U-21)
    - Compared to its sister unit group and other sister unit groups (#U-22)
    - Compared to its sister unit group and its reactor type (#U-25)
    - Compared to countries (#U-24)
    - Compared to other units in its sister unit group (#U-23)

- Evolution of the average annual collective dose by country for 1 reactor type

First year to take into account:	1998
Last year to take into account:	2009
Reactor type:	PWR
First country:	France
Second country:	Spain
Third country:	United States of America
Fourth country:	Germany

Run | Return to list

PWR: France, Spain, United States of America, Germany
EVOLUTION OF THE AVERAGE ANNUAL COLLECTIVE DOSE PER REACTOR (in man.Sv)



Download picture

	France	Germany	Spain	United States of America
1998	1.21	1.01	0.54	0.94
1999	1.17	1.23	0.71	1.06
2000	1.09	1.13	0.59	0.96
2001	1.02	0.89	0.43	0.91
2002	0.97	1.23	0.50	0.87
2003	0.89	1.04	0.43	0.90
2004	0.79	0.90	0.31	0.72
2005	0.78	1.32	0.42	0.77
2006	0.69	0.84	0.38	0.86
2007	0.62	1.04	0.50	0.65
2008	0.66	0.62	0.29	0.68
2009	0.70	1.18	0.87	0.67

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Utilities only

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TOPICS	REPLIES	VIEWS	LAST POST
Management involment in ALARA issues by **svedberg** » 26 Nov 2010 09:52	8	40	by **hennigor** 05 Jan 2011 20:28
QUESTIONNAIRE ON "MONITORING, SAMPLING AND FLOW MEASUREMENT by **gaillardlecanu** » 22 Nov 2010 15:21	9	43	by **dascenzo** 02 Jan 2011 22:10
Control of fixed contamination by **leduc** » 13 Oct 2010 14:56	3	43	by **rosellh** 29 Dec 2010 09:05
Washing hands before monitoring or not? by **svedberg** » 04 Sep 2009 08:14	10	50	by **rosellh** 29 Dec 2010 08:40
Dose Constraints experience and implementation by **svedberg** » 26 Nov 2010 09:59	4	31	by **renn** 22 Dec 2010 13:00
Kr85 and As76 in radioactive releases by **dobis** » 08 Apr 2010 19:21	11	47	by **prim** 17 Dec 2010 08:35

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