



JORNADAS INTERNACIONALES DE TRABAJO

Modelos de gestión para la participación de los agentes sociales en la toma de decisiones en protección radiológica

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Independent Environmental radiological surveillance by universities in the environs of nuclear power plants

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Legal base and regulations

- The Spanish law 15/1980 April 22th of creation of Nuclear Safety Council (NSC), in their first article, declares de NSC as the "unique competent organism on nuclear safety and radiological protection"
- Among the competencies assigned to it is "to control and survey the radiation levels in the inside and outside of the nuclear and radioactive facilities and its possible incidence in the areas they are located...and to evaluate the ecological impact of this facilities"



Legal base and regulations

- The bases for the establishment of the environmental radiological surveillance programs are in the Real Ordinance 783/2001 of July the 6th in the articles 47 and following
- The need to carry out a PVRA are established in the safety conditioned that goes along with administrative authorizations



Safety guide

- The bases for the design and development of PVRA are in the Safety Guide nº 4.1 "Design and development of the environmental radiological surveillance program for nuclear power plants"



Some definitions

- Analytical radiological Studio (EAR)- Group of studies carried out with data from the power station and from the area where it is located in order to theoretically guess the potential radiological impact of the power station on the individuals, population and environment



Some definitions

- PVRA.- Group of operations (sample collection, preparation and analysis) aimed to evaluate the radiological impact on the environment
- Exposure pathways.- Different pathways through which the radionuclides can affect people



PVRA phases

- Preoperational phase
- Operational phase
- Decommissioning and closure phase
- Postclosure phase



Quality assurance

- Safety guide 4.1 requires the establishment of PVRA quality assurance

University participation is performed in this framework



University participation

- Is not homogeneous
- The University of Barcelona along with the Polytechnic University of Catalonia, perform the Quality control of PVRA of Asco y Vandellos (thorough the "Encomienda")
- The Universities of Valencia and Polytechnic of Valencia carry out the quality control of the PVRA of Cofrentes (thorough the "Encomienda")



University participation

- The power plants located in communities which have not "Encomienda", carry out the quality control of the PVRA through direct contract with the CSN
 - University of León for Santa María de Garoña
 - University of Castilla la Mancha for power plants of Zorita and Trillo
 - University of Extremadura for Almaraz
- The University of Extremadura also carries out an additional complete PVRA of Almaraz for the Junta de Extremadura



Comments

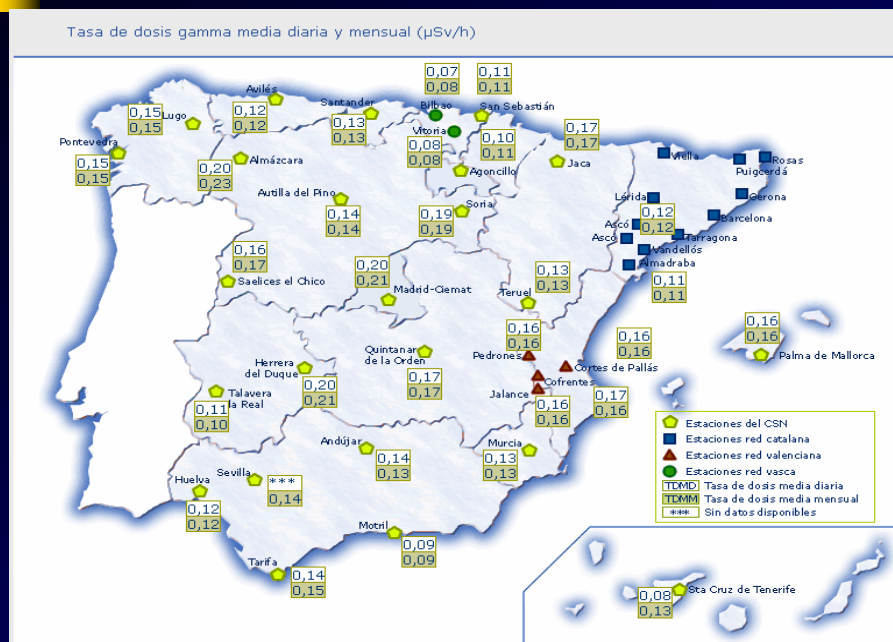
- The quality control programs analyze 5% of the total of the samples muestras analyzed in the PVRA approximately
- The reports are delivered by universities to the entity which have ordered them (The CSN directly or thorough "Encomiendas" to the "Comunidades Autónomas")
- The contracts include clause of confidentiality



- The PVRA of the University of Extremadura provide to the Junta data every six months
- Do not include clauses of confidentiality
- The university responsible of this programs think that the truthful and immediate information is the base of social trust



Automatic station net





Stations data REA (I)



Comunidad Autónoma	Estación	Tasa de dosis media (μSv/h)	
		07/11/2005	Mes anterior
Andalucía	Andújar	0,14	0,13
Andalucía	Huelva	0,12	0,12
Andalucía	Motril	0,09	0,09
Andalucía	Sevilla	****	0,14
Andalucía	Tarifa	0,14	0,15
Aragón	Jaca	0,17	0,17
Aragón	Teruel	0,13	0,13
Asturias	Avilés	0,12	0,12
Baleares	Palma de Mallorca	0,16	0,16
Canarias	Sta. Cruz de Tenerife	0,08	0,13
Cantabria	Santander	0,13	0,13
Castilla y León	Almázcara	0,20	0,23
Castilla y León	Soria	0,19	0,19
Castilla y León	Saelices el Chico	0,16	0,17
Castilla y León	Autilla del Pino	0,14	0,14
Castilla-La Mancha	Quintanar de la Orden	0,17	0,17



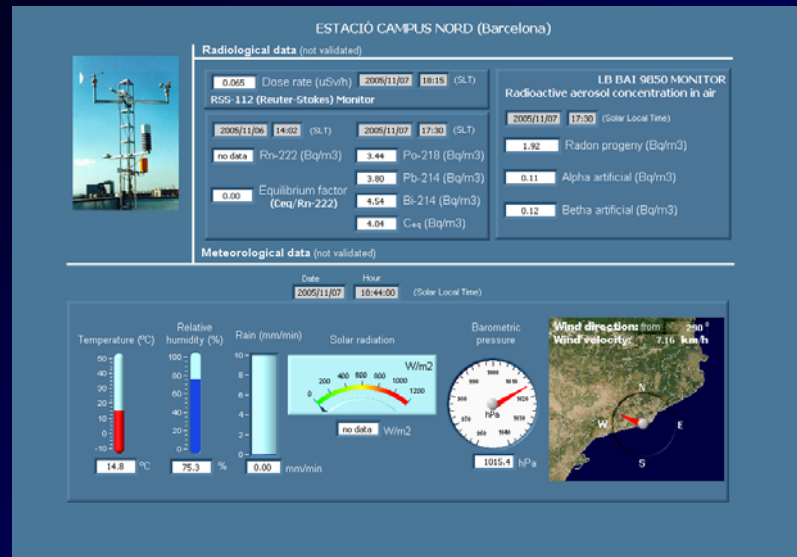
Stations data REA (II)



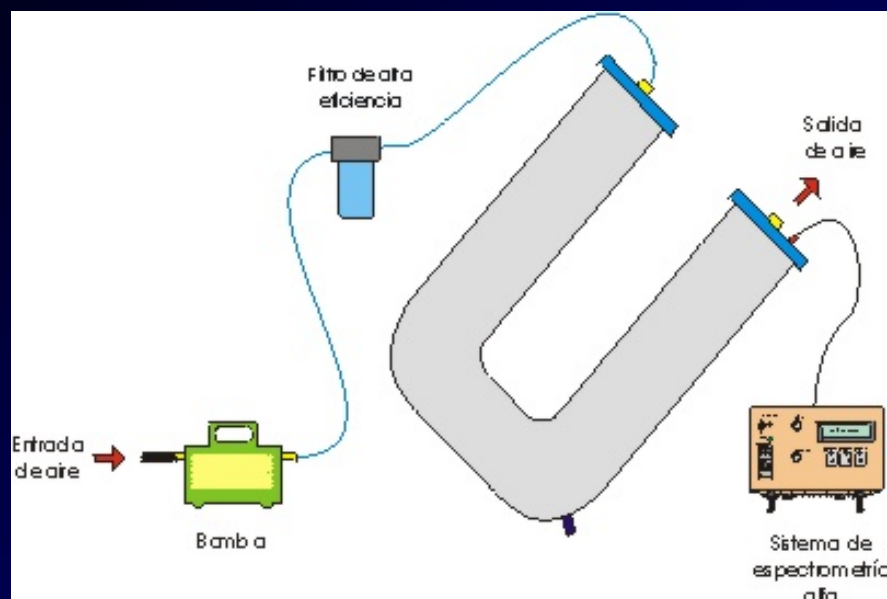
Comunidad Autónoma	Estación	Tasa de dosis media (μSv/h)	
		07/11/2005	Mes anterior
Cataluña	Almadraba	0,11	0,11
Cataluña	Ascó	0,12	0,12
Extremadura	Talavera la Real	0,11	0,10
Extremadura	Herrera del Duque	0,20	0,21
Galicia	Lugo	0,15	0,15
Galicia	Pontevedra	0,15	0,15
Madrid	Madrid-Ciemat	0,20	0,21
Murcia	Murcia	0,13	0,13
País Vasco	San Sebastián	0,11	0,11
País Vasco	Bilbao	0,07	0,08
País Vasco	Vitoria	0,08	0,08
Rioja	Agoncillo	0,10	0,11
Valencia	Cofrentes	0,17	0,16
Valencia	Pedrones	0,16	0,16
Valencia	Jalance	0,16	0,16
Valencia	Cortes de Pallás	0,16	0,16

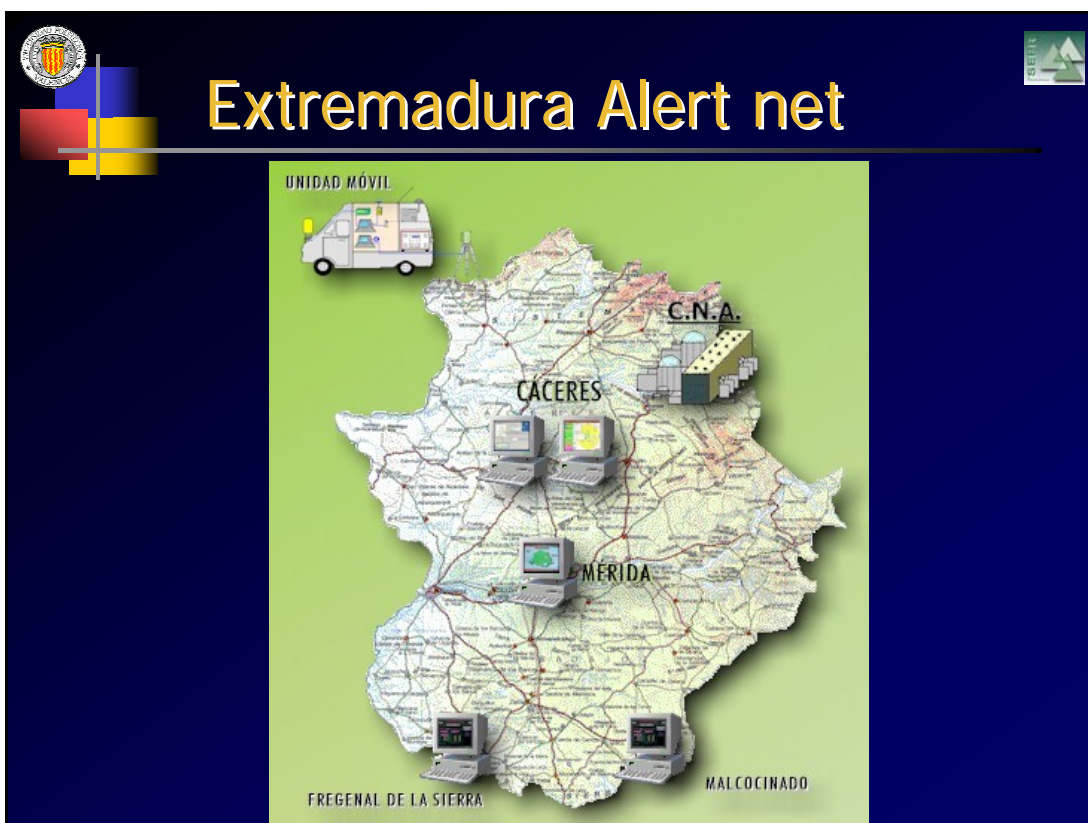


Radilological control UP catalunya



Radilological control UP catalunya







Final considerations

- The participation of the university in the management models is positive
 - For prestige and social credibility
 - For scientific and technical qualification
 - For their independence
- Releasing data directly by universities could be considered
- University participation in radiological surveillance programs in emergency (PVRE) may be interesting