

In cooperation with



**International Workshop on
Radiation Protection Culture
in Waste Management**



**Fachverband für
Strahlenschutz e.V.**

Mitgliedsgesellschaft der IRPA
International Radiation Protection Association
für Deutschland und die Schweiz

31 Aug to 2 Sept 2015, Schloss Böttstein, Switzerland



Schloss Boettstein, www.swisscastles.ch

supported by AXPO AG

and

Paul Scherrer Institute



Programme, Monday 31.08.2015

Time			Room/Place
13:00	Opening	G. Hampel	Axporama, Meeting Room 1
13:15	Radiation Protection Culture	R. Czarwinski	
13:45	Introduction of the participants	All	
Plenary Work			
14:00	A: Dose reduction vs. waste minimisation (WG 1)	H. Schulze	Axporama, Meeting Room 1
14:30	C: Asse II mine - History and current problems (WG 4)	J. Feinhals	
15:00	Coffee		
15:30	B: Interim storage vs. disposal (WG 3)	R. Gellermann	
16:00	D: A common dose concept for clearance and release (WG 7)	J. Feinhals	
16:30	Break		
17:00	Axporama (guided tour)		
18:00	Welcome at Axporama	U. Weidmann	
19:00	Dinner at Schloss Böttstein		Schloss Böttstein



Axporama Böttstein, Aargau Tourismus



Programme, Tuesday 01.09.2015

Time		Room/Place
09:00	Introduction	Axporama, Meeting Room 1
09:15	Group Work	
	Group A	Axporama, Meeting Room 1
	Group B	Axporama, Meeting Room 2
	Group C	NPP Beznau, SZ 1
	Group D	NPP Beznau, SZ 2
12:30	Lunch	KKB canteen
14:00	Group Work	
17:56	Bus from Böttstein	or private cars
18:08	S-Bahn from Döttingen to Waldshut	
18:30- 20:00	Tour in Waldshut: The meeting point is railway station at Waldshut	
20:00	Dinner	Restaurant Lamm
	Return by train and/or private cars	

Programme, Wednesday 02.09.2015

Time		Room/Place
	Presentation of results	
08:30	Group A	
09:15	Group B	
10:00	Break	Axporama, Meeting Room 1
10:30	Group C	
11:15	Group D	
12:30	Conclusions	
12:45	Snack	
13:30	Visit of facilities at ZWILAG	ZWILAG Würenlingen
15:30	End of Visit/Workshop	



List of Registered Participants

Name	First Name	Company	Group
Benmokhtar	Sofiane	Magnox, UK	C (WG 4)
Czarwinski	Renate	IRPA; BfS, D	C (WG 4)
Ehrlicher	Ulrich	PSI, CH	B (WG 3)
Feinhals	Jörg	DMT, D	D (WG 7)
Gellermann	Rainer	NCC, D	C (WG 4)
Grünberg	Peter	NAGRA, CH	C (WG 4)
Guiot	Benoit	FANC, B	A (WG 1)
Hampel	Gabriele	AXPO, CH	D (WG 7)
Neukäter	Erwin	BKW, CH	D (WG 7)
Reichert	Alexander	WAK, D	B (WG 3)
Schröder	Jantine	SCK/CEN, B	B (WG 3)
Schulze	Hartmut	GNS, D	A (WG 1)
Sierra	Isabel	PSI, CH	D (WG 7)
Stackhouse	Adam	SEPA, UK	D (WG 7)
Stroude	Raphael	BAG, CH	A (WG 1)
Theis	Stefan	ENSI, CH	B (WG 3)
Ulrici	Luisa	CERN	A (WG 1)
van der Meulen	Nicholas Philip	PSI, CH	B (WG 3)
Vanhemelryck	Fery	Elektrabel, B	C (WG 4)
Vermeulen	Christiaan	PSI, CH	A (WG 1)





A: Dose reduction vs. waste minimisation:

Many countries have a law about waste minimisation in force. This underpins the imperative of dose reduction, as waste minimisation causes further work in controlled areas. A holistic optimisation process might be the right solution to get out of this dilemma, considering both the dose reduction and the waste minimisation. In some cases a modification of the national law is necessary. Switzerland has explicit regulations for waste minimisation, as Germany is still trusting in the market.

References: Radioactive Waste Management Programmes in OECD/NEA Member Countries, 2015 (e.g.: https://www.oecd-nea.org/rwm/profiles/Sweden_profile_web.pdf, https://www.oecd-nea.org/rwm/profiles/Spain_profile_web.pdf)

B: Interim storage vs. disposal:

The commissioning of a disposal facility is often postponed due to many different reasons. Due to these delays the duration of the interim storage last much longer than planned. Often additional work has to be done to keep the interim storage safe causing additional dose for the workers. Do we need a speed up of the process for a disposal facility?

References: ICRP 81, Radiological Protection in Geological Disposal of Long-Lived Solid Radioactive Waste; ICRP 103, The 2007 Recommendations of the International Commission on Radiological Protection

C: How to deal with safety culture deficiencies?

Safety culture is not a constant standard existing in the same way at the beginning of nuclear technology as today. How to deal with legacies with radioactive waste, which we classify today as legacy but in former times they were in compliance with state of the art? How can we avoid a general demonization of the waste management of nuclear waste today by the legacies of waste from yesterday?

Reference: Borchers, Engelmann, Feinhals, Schulze, The Proper Radiation Protection Balance, IRPA-EU-14, Geneva 2014

D: A common dose concept for clearance and release?

The clearance system is very important for a national waste management programme. Clearance is one of the most important tools to ensure that radioactive waste generated is kept to a minimum practicable. A dose concept of up to 300 $\mu\text{Sv}/\text{yr}$ for release of a site (IAEA: WS-G-5.1) should fit to the other dose concept of some 10 $\mu\text{Sv}/\text{yr}$ for clearance of materials and exemption (IAEA: RS-G-1.7). It should be checked the possibility of a common dose concept for the release/clearance of material and sites from regulatory control as well as for exemption. Actually, the description of two different concepts in two guides has a strong overlap for example for materials resulting from the release of a site on the one hand and clearance of parts of buildings or excavated soil on the other hand. It should be checked, if the existing two concepts should be merged together in one concept.

References: IAEA RS-G-1.7, Application of the Concepts of Exclusion, Exemption and Clearance, 2004; WS-G-5.1, Release of Sites from Regulatory Control on Termination of Practices, 2006