

GIROSCOPE

WP2: SOURCE TERM CHARACTERIZATION FOR Novel Nuclear Reactors (UGOT, NCBJ, CNL, NMBU, Bfs, M1-M30)

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WP2 objectives



1. Develop a methodology for source term assessment for normal operations and accident analysis and identification of new release pathways for NNRs. The methodology for source term assessment is developed based on three case studies that are of interest in the project partner countries:
 - a) High-Temperature Gas-cooled Reactor as
 - Research HTGR-POLA prismatic block reactor, planned in Poland at NCBJ and developed by the Division of Nuclear Energy and Environmental Studies
 - Canadian HTGR, pebble-bed reactor
 - b) Copenhagen Atomics Compacted Molten Salt Reactor (CMSR), with liquid fuel salt ${}^7\text{LiF}-{}^{232}\text{ThF}_4-{}^{238}\text{UF}_4$ at $> 600^\circ\text{C}$ and a breedable blanket salt as ${}^7\text{LiF}-{}^{232}\text{ThF}_4$ at 600°C , under development in Denmark, and under evaluation for possible use on reactor driven ships in Norway
 - c) Small Light Water Reactors (SLWR):
 - Integral pressurised water reactor (iPWR) and BWR, Canada
 - Rolls Royce Small Modular Reactor (RR SMR), PWR, Vattenfall investigate the possibility of building SWLRs on the Swedish west coast
2. Develop knowledge, skills, and capacity to prevent and/or manage and minimize the consequences of an NNR accident.

WP2 Deliverables

D2.1. Report on Source Term for Severe Accidents in NNR Types.

D2.2. Report on Source Term for Annual Releases in NNR Types.

D2.3. Source Term Database and Input Files Compatible with JRODOS System/PC-CREAM and PACE.

Guidance for Innovative Reactor Off-Site Consequences, Planned and Emergency (GIROSCOPE)																																				PMs-Partner contribution, lead partner											
Gantt chart																																				NCBU	CEPN	CIEMAT	NCSRd	NMIBU	UGOT	UKHSA	BFS	IRSN	APA	CNL	
Months	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36											
WP1 Management, dissemination and translation																																															
Task 1.1	Project management and coordination											D1.1												D1.1												D1.2	x	x	x	x	x	x	x	x	x	x	
Task 1.2	Data Management Plan												D1.3																								x	x	x	x	x	x	x	x	x		
Task 1.3	Dissemination, communication and impact creation																																				x	x	x	x	x	x	x	x	x		
Task 1.4	Translation and exploitation												D1.4												D1.4												D1.4	x	x	x	x	x	x	x	x	x	
WP2 Source term characterization for Novel Nuclear Reactors																																															
Task 2.1	Understanding Novel Nuclear Reactor Characteristics						M2.1						D2.1																									x				x	x			x	
Task 2.2	Source Term Assessment - Identification of New Potential Release Pathways											M2.2			D2.2																						x				x					x	
Task 2.3	Database Establishment																				D2.3										M2.3	D2.3					x					x				x	