

## Welcome

Jung Wan Kwon Head, Division of Emergency Preparedness

> 2024 Spring International Ramp Users' Group Meeting

April 16–19 Seoul, South Korea





## Welcome

#### Stephanie P. Bush-Goddard, Ph.D.

Senior Researcher/RAMP Program Manager

2024 Spring International Ramp Users' Group Meeting

> April 16–19 Seoul, South Korea



# Agenda

U.S. UNITED STATES NUC Protecting Peop

United States Nuclear Regulatory Commission

- Introduction to the RAMP Program
  - Code Development
  - Code Maintenance
  - Code Distribution
  - User Groups



RAMP Program User Meeting Logistics











# THE NRC: WHO WE ARE AND WHAT WE DO









### Office of Nuclear Regulatory Research

- Mandated by US
  Congress
- ~200 Engineers, Scientist and Support Staff
- ~ \$40M USD Funding





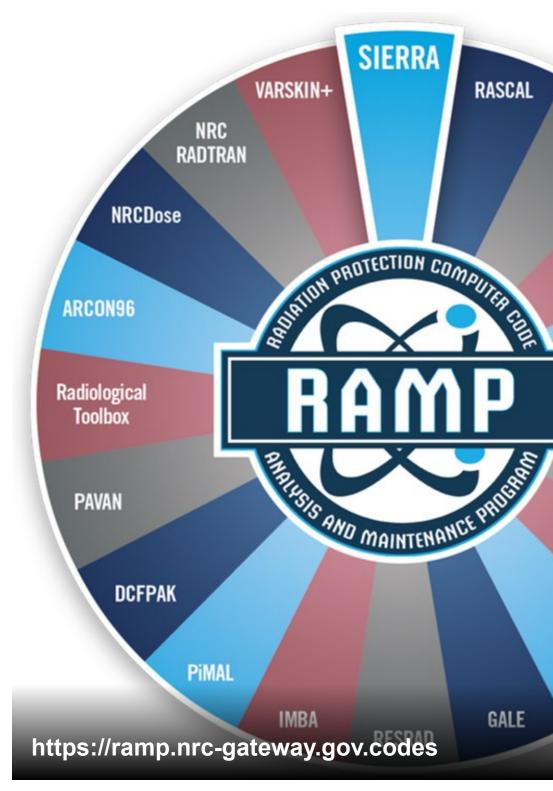
# US NRC RAMP Program





### What is RAMP?

- Code Development
- Code Maintenance
- Code Distribution
- User Groups





#### GENII

#### MILDOS

#### Turbo FRMAC

#### HABIT

DandD



### **Five Types of Computer Codes**



### Based on US NRC Regulatory Framework





















United Institution Regulatory Constitution Protecting People and the Electrometers

NRC Non-Light Water Reactor (Non-LWR) Vision and Strategy, Volume 4 – Licensing and Siting Dose Assessment Codes



# Major Activities in 2024

- Non-LWR Activities
- SIERRA Code
- CAP 88
- RASCAL 5







#### Software Integration for ronmental Radiological Rel SIERRA Codessments



# User Meeting Logistics



### Schedule at a Glance/Agenda Day 1 and Day 2



DAY 1   TUESDAY, APRIL 16, 2024 (All times are in KST)			
8:00 a.m.—8:30 a.m.	Registration		
8:30 a.m.—9:00 a.m.	Welcome and Updates on the U.S. NRC RAMP Program (Ivy Hall)		
9:00 a.m.—12:00 p.m.	Emergency Response, Assessment, and Prognosis Symposium (Ivy Hall)		
12:00 p.m.—1:30 p.m.	Lunch (on your own)		
1:30 p.m.—5:00 p.m.	Emergency Response, Assessment, and Prognosis Symposium (Ivy Hall)		
6:00 p.m.—8:30 p.m.	Hospitality Event (Jumbo, President Hotel)		
DAY 2   WEDNESDAY, APRIL 17, 2024 (All times are in KST)			
8:00 a.m—8:30 a.m	Registration		
8:30 a.m—12:00 p.m.	Emergency Response, Assessment, and Prognosis Symposium (Brahms Hall)		
12:00 p.m.—1:30 p.m.	Lunch (on your own)		
1:30 p.m.—5:00 p.m.	RASCAL – Beginner/Intermediate (Brahms Hall)	Introduction to SIERRA, Source Term, and ATD modules (Ivy Hall)	





### Agenda/Schedule at a Glance Day 3 and Day 4



DAY 3   THURSDAY, A	PRIL 18, 2024 (All times are in KST)	
8:00 a.m—9:00 a.m	RAMP – Ask Me Anything	
9:00 a.m—12:00 p.m	RASCAL – Exercise (Brahms Hall)	NRCDose3 (Ivy Hall)
12:00 p.m—1:30 p.m	Lunch (on your own)	
1:30 p.m—5:00 p.m	Turbo FRMAC – Beginner/Intermediate (Brahms Hall)	NRC-RADTRAN – Introduction Exercise (Ivy Hall)
DAY 4   FRIDAY, APRI	L 19, 2024 (All times are in KST)	
9:00 a.m—11:30 a.m	<b>Turbo FRMAC – Exercise</b> (Brahms Hall)	NRC-RADTRAN – Future Wor (Ivy Hall)
11:30 a.m—12:00 noon	Closing Ceremony (Brahms Hall)	







### Symposium: Emergency Response, Assessment and Prognosis: Day 1



DAY 1 (All times are in KST)		PRESENTER
8:00 a.m8:30 a.m.	Registration	
8:30 a.m8:45 a.m.	Welcome	J. Kwon KINS
8:45 a.m9:00 a.m.	Updates on the U.S. NRC RAMP	S. Bush-Goddard U.S. NRC
9:00 a.m9:50 a.m.	Brief on the South Korean National and Organizational Response Framework	K. Choi KINS
9:50 a.m10:05 a.m	Break	
10:05 a.m11:00 a.m.	Brief on the American National and Organizational Response Framework and Lessons from TMI-2	J. Kowalczik U.S. NRC
11:00 a.m12:00 noon	Brief on the Canadian National and Organizational Response Framework	T. Nguyen CNSC
12:00 noon-13:30 p.m.	Lunch	
13:30 p.m14:15 p.m.	Brief on the French National and Organizational Response Framework	E. Quentric IRSN
14:15 p.m15:00 p.m.	Lessons Learned from the Fukushima Daiichi Accidenton A&P	T. Homma NRA
15:00 p.m15:15 p.m.	Break	
15:15 p.m16:00 p.m.	IAEA Emergency Response Roles	F. Stephani IAEA
16:00 p.m16:45 p.m.	European Commission Emergency Preparedness and Response Capabilities	J. Carlos de la Rosa Blul European Commissio (Virtual)
16:45 p.m17:00 p.m.	Discussion and Wrap-up End 1st Day Session	







### Symposium Day 2



DAY 2 (All times are in KST)		
8:00 a.m8:30 a.m.	Registration	
8:30 a.m10:00 a.m.	Panel Discussion on A&P and Highlights from Day-1	
10:00 a.m.–10:15 a.m.	Break	
10:15 a.m10:40 a.m.	U.S. NRC A&P tools and Use Cases (RTT, RASCAL, etc.)	
10:40 a.m.–11:05 a.m.	IAEA A&P Tools and Use Cases (RAT, DBST, etc.)	
11:05 a.m.–11:30 a.m.	IRSN A&P Tools and Key Objectives (SESAME)	
11:30 a.m11:55 a.m.	A&P Tools Collaboration Opportunities	





#### PRESENTER



#### J. Kowalczik U.S. NRC

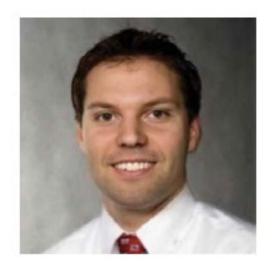
### F. Stephani

#### E. Quentric IRSN

#### J. Kowalczik U.S. NRC

### **Trainers**





Jeff Kowalczik, US NRC



Caitlin Condon, PNNL

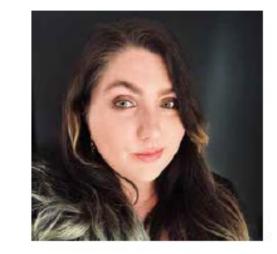




Jon Napier, PNNL



Brian Hunt, SNL







### Steward Bland, Chesapeake Nuclear

### Autumn Kalinowski, SNL

### **RAMP** Team



#### NRC RAMP Team











John Tomon BRANCH CHIEF

Stephanie Bush-Goddard SENIOR RAMP PROGRAM MANAGER

PNNL RAMP

**Rigel Flora** RAMP RASCAL PROGRAM MANAGER

Don Lowman RAMP PROGRAM TEAM

Sam Edwards RAMP PROGRAM TEAM

#### Pacific Northwest National Laboratory (PNNL) RAMP Team



Caitlin Condon PNNL RAMP

PROGRAM MANAGER



Harish Gadey

DEPUTY PNNL RAMP

PROGRAM MANAGER



Luba Hamilton PNNL RAMP PROGRAM COORDINATOR





Julia Flaherty PNNL RAMP TEAM MEMEBER

#### LEIDOS RAMP Team





Wendy Chinchilla LEIDOS RAMP PROGRAM MANAGER

Frederic Gooding OPERATIONS SUPPORT

LEIDOS RAMP

LEIDOS RAMP







Eric Zimmerman CONTENT MANAGEMENT



Venukumar Devlandla LEIDOS RAMP DRUPAL DEVELOPER

### **KINS: Thank You!**





Kihoon Yoon HEAD, DEPARTMENT OF NUCLEAR EMERGENCY PREPAREDNESS Youngmin Lee SENIOR RESEARCHER Kyuwon Choi SENIOR NUCLEAR SAFETY INSPECTOR











### Your Role

- I challenge you.....
  - To learn
  - To participate
  - To question
  - To think outside the box
  - To bring suggestions for improvement
  - To have fun
- Let's take a picture and cut the cake!





# Thank you

