

# Practical Training Course on Planning and Implementation of Nuclear Facility Decommissioning and Remediation of Radioactively Contaminated Sites

April 13-24, 2015

*Hosted By:* International Programs Section  
Argonne National Laboratory  
[international.anl.gov](http://international.anl.gov)





# THE PURPOSE

# Training

## PROJECT

Regional Project INT9175 “Promoting Safe and Efficient Clean-Up of Radioactively Contaminated Facilities and Sites”

## USES

- Provide a global understanding of the key aspects that need to be considered in planning and implementing D&ER projects.
- Discuss potential mechanisms that can help overcome constraints in planning.
- Understand necessary infrastructure, planning, management, cost estimates, site-characterizations, post-remediation activities, and institutional controls.



Fukushima Daiichi Nuclear Power Station, Tokyo, Japan (February 2015)  
Photo Credit: Susanna Loof/ IAEA



# THE COURSE

# Welcome to Argonne National Laboratory

Introduction  
to Argonne



Safety at  
Argonne



# The Lecturers and Staff

Course Leaders: Larry Boing, Argonne National Laboratory &  
Karen Smith, Argonne National Laboratory

Program Manager: Sunaree Hamilton, Ph.D., Argonne National Laboratory



Peter Booth



Joseph E. Carignan



Rick Demmer



Douglas G. Draper



Lisa Durham



Tom Hansen



Eugene Jablonowski



Robert Johnson



Andrew Lombardo



David LePoire





# The Lecturers and Staff



Louis Martino



Dustin Miller



Horst Monken-Fernandes



Lawrence Moos



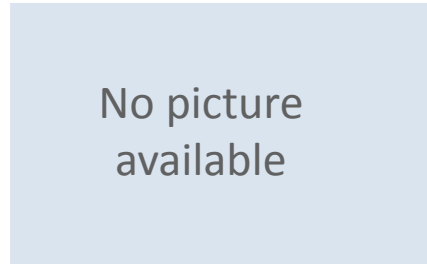
Jean-Guy Nokhamzon



Young Soo Park



Vern C. Rogers



Donald E. Williams Jr.



Charley Yu



# Lawrence E. Boing, Argonne National Laboratory

IAEA Networks &  
Resources

Intro to  
Decommissioning

Waste  
Management

Dismantling  
Techniques



# Karen P. Smith, Argonne National Laboratory

Determining  
End States and  
Future Site Uses



# Horst Richard Monken-Fernandes, International Atomic Energy Agency

IAEA Cider  
Project



# Peter Booth, Hylton Environmental

IAEA  
Networks &  
Resources

Lifecycle  
Management  
Framework

Stakeholder  
Engagement

Conceptual  
Site Models



# Joseph E. Carignan

Cost  
Estimation and  
Contracting



# Rick Demmer, Idaho National Laboratory

Decontamination  
Technologies



# Douglas G. Draper, ES&H Professional Services

Material  
Clearance

Records

Safety  
Assessment





# Lisa Durham, Argonne National Laboratory

Site  
Closure



# Tom Hansen, Ameriphysics, LLC.

Environment,  
Safety, & Health  
Issues

Building  
Characterization

Final Status  
Surveys



# Eugene Jablonowski, US Environmental Protection Agency

Site  
Characterization



# Robert Johnson, Argonne National Laboratory

Environmental  
Site  
Characterization

Measuring  
Radionuclides in  
the  
Environment

Surface Soils



**Andrew Lombardo,  
Perma-Fix  
Environmental  
Services, Inc.**

Plum Brook  
Research  
Reactor



# David LePoire, Argonne National Laboratory

RESRAD  
(Onsite)  
Demo

RESRAD-  
BUILD



# Louis Martino, Argonne National Laboratory

Remedial  
Action  
Alternatives

ER Cost  
Estimation



# Dustin Miller, J.G. Management Systems, Inc.

University of  
Buffalo  
Research  
Reactor D&D





# Lawrence Moos, Argonne National Laboratory

## Argonne Case Study



# Jean-Guy Nokhamzon, CEA/DEN/DADN

French Waste  
Clearance  
Process



# Young Soo Park, Argonne National Laboratory

Remote  
Systems



# Vern C. Rogers, Energy Solutions, Inc.

## Waste Disposal



# Donald E. Williams, Jr., ZionSolutions/Energy Solutions, Inc.

Zion Nuclear  
Power Plant  
Decommissioning



# Charley Yu, Argonne National Laboratory

RESRAD  
(Onsite)  
Demo

RESRAD-  
BUILD



# THE PARTICIPANTS



Aysel  
Hasanova  
Azerbaijan







Flavia  
Brandao  
**Brazil**





Peter  
Marshall  
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**Brazil**





Flavia Vieira  
**Brazil**





Xuegang Liu  
China





# Kristel Kilk

## Estonia





Zsolt  
Sebestyén  
**Hungary**





# Budi Setiawan Indonesia





Qusay  
Abdulwahhab  
Abdulhadi  
Iraq







Anwar  
Abdulfattah  
Ahmed  
Iraq



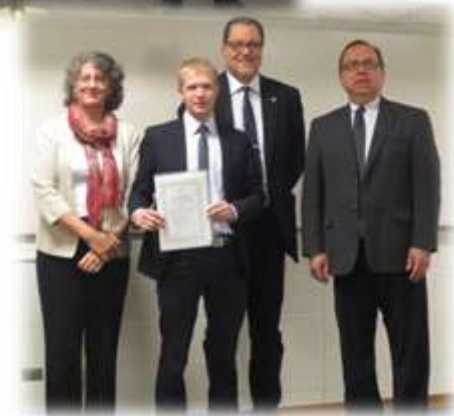


Haydar Ahmed  
Al-Najar  
Iraq





Alexandr  
Moshkov  
Kazakhstan





Marat  
Stamkulov  
Kyrgyzstan





Inese  
Martinsone  
Latvia





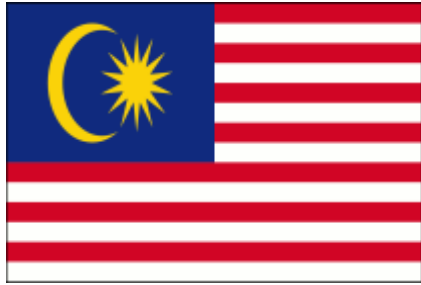
Voldemars  
Polis  
Latvia





Rima  
Ladygiene  
Lithuania





# Esther Phillip Malaysia







Juan Alberto  
Salmeron Vergara  
**Mexico**





Romelda  
Azores  
**Philippines**





Alfonso  
Singayan  
**Philippines**





Tatyana  
Rakitskaya  
**Russian  
Federation**





Dalibor  
Arbutina  
**Serbia**





Zuzana  
Cisarova  
Slovakia





Vladimir  
Jurina  
Slovakia





Adela  
Mrskova  
Slovakia







Azimjon  
Barotov  
Tajikistan





Begmurot  
Boboev  
Tajikistan





Thomas  
Ocilaje  
Uganda





Volodymyr  
Datsenko  
Ukraine





Stanislav  
Matakov  
**Ukraine**





Mushaukwa  
Liswani  
Kabuku  
**Zambia**





**IAEA - Argonne**

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Nuclear Facility Decommissioning and Remediation of  
Radioactively Contaminated Sites**



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THANK YOU