CCSI™
Carbon Capture Simulation Initiative

CCSI Industry Advisory Board (IAB) Program Review Meeting

September 23-24, 2015

Hyatt
Reston, VA

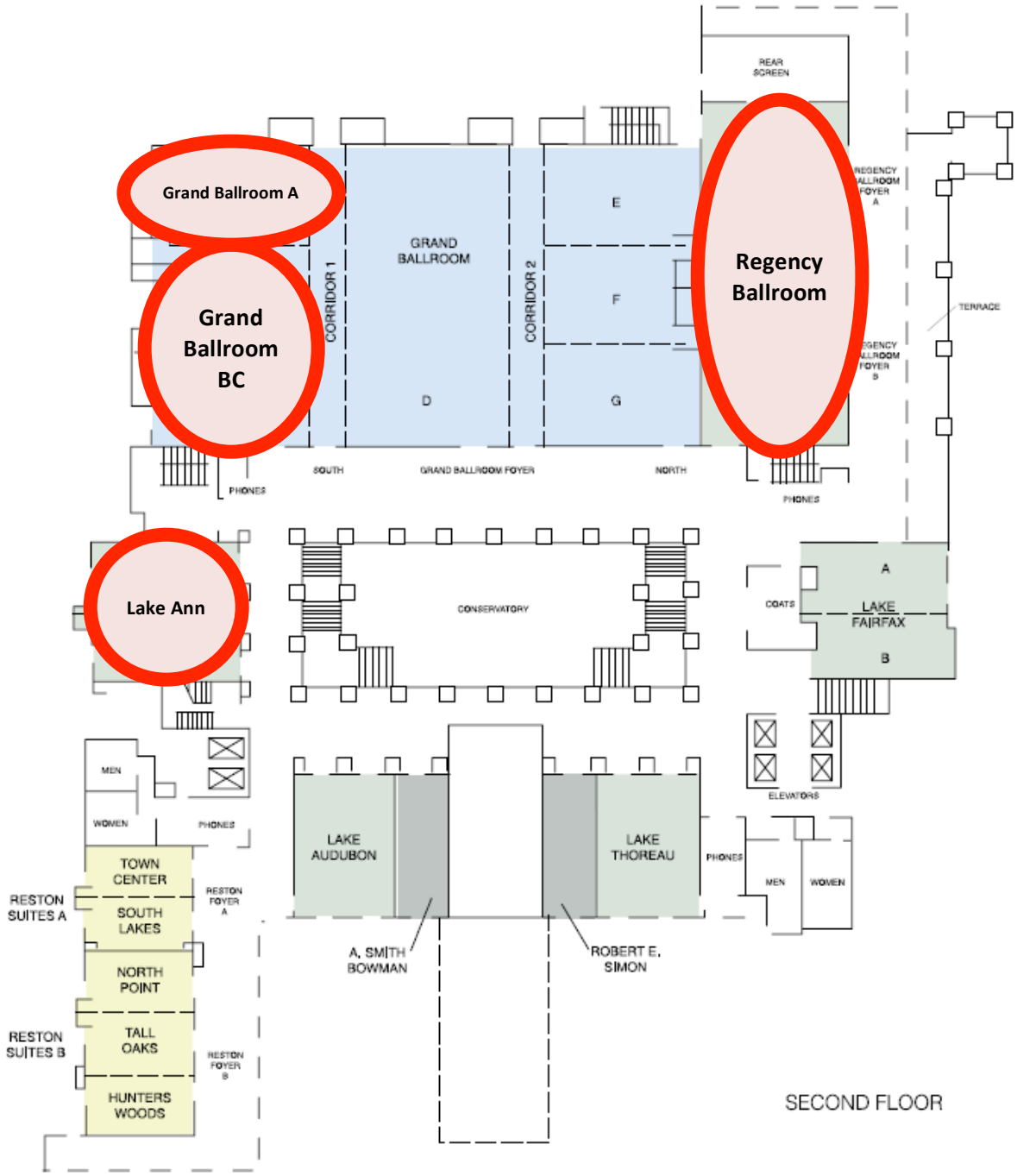
Wednesday, September 23			
Start	**End**	**Topic**	**Room**
8:15	8:45	**Registration**	**Lobby**
8:45	9:00	**Welcome & Meeting Overview** John Shinn & David Miller	**Grand Ballroom BC**
9:00	9:30	***Keynote*** Regis K. Conrad, Director, Division of Advanced Energy Systems U.S. Department of Energy, Office of Fossil Energy	
9:30	10:00	**Coffee Break**	
10:00	10:45	**Review of Overall CCSI Program** David Miller	
10:45	12:00	**Toolset Capabilities: Process Systems (Solid Sorbents)** Kinetic Model Process Models Process Optimization, UQ, and Optimization Under Uncertainty Advanced Process Control	
12:00	12:45	**Lunch**	
12:45	1:00	**IAB Photo**	
1:00	2:00	**Toolset Capabilities: Device Scale Simulation (Solid Sorbents)** Filtered Models Hierarchical Calibration and Validation Particle Attrition and Breakage	
2:00	2:15	**Break**	
2:30	3:15	**Toolset Capabilities: Process Systems (Solvents)** Physical and Thermodynamic Property Regression and UQ Steady State & Dynamic Model Validation	
3:15	4:00	**Toolset Capabilities: Device Scale Simulation (Solvents)** Wetted Wall Predictions Of Diffusivity & Mass Transfer Device Scale Prediction of Vapor-Liquid Contactor Behavior	
4:00	5:30	**Poster Session** Continues through reception	**Grand Ballroom A Lake Ann**
5:30	6:30	**Reception**	**Regency Ballroom**
6:30	9:00	**Working Dinner** Speaker: Dr. Madhava Syamlal, Focus Area Lead, Computational & Basic Sciences, National Energy Technology Laboratory	

NETL · Berkeley Lab · Lawrence Livermore National Laboratory · Los Alamos National Laboratory · Pacific Northwest National Laboratory

Thursday, September 24			
8:15	8:45	**Registration**	**Lobby**
8:45	9:00	**Welcome & Day 2 Overview** David Miller	**Grand Ballroom BC**
9:00	9:30	***Carbon Capture and Simulation*** John T. Litynski, Carbon Capture Program Manager U.S. Department of Energy, Office of Fossil Energy	
9:30	10:00	**Coffee Break**	
10:00	11:00	**Industry Success Stories** Terri Grocela-Rocha, GE Betty Pun, Chevron Hamid Sarv, B&W	
11:00	11:30	**Toolset Commercialization Activities** Penny Stanger, Process Systems Enterprise, Ltd.	
11:30	12:00	**Introduction to CCSI^2** David Miller	
12:00	1:00	**Future Directions and Plans for Post-CCSI** Working Lunch	
1:00	3:30	**Dig Deeper on CCSI Toolset (Demonstration and Discussion)** **Partnership Discussions**	**Grand Ballroom A Lake Ann**
3:30	5:00	**IAB Feedback Session** John Shinn, Chair, Industry Advisory Board	**Grand Ballroom BC**
		Conclusion of IAB Mtg	

Poster/Discussion/Demo Sessions

Grand Ballroom A	**CFD Modeling Suite** 1. Validation hierarchies for sorbent and solvent-based capture systems to quantify CFD predictive confidence 2. Predicting Adsorber Scale-up Performance using Validated CFD Model with Quantitative Confidence 3. Solvent-based capture prediction: CFD tools at different scales 4. Multiscale Filtered Models for Multiphase Flows 5. Particle Attrition and Coal Pulverization Modeling 6. Using CCSI Tools to Accelerate Novel Capture CO_2 Technologies: ADA Case Study **Basic Data Tools** 7. Generic Amine Solvent Modeling Method: 2MPZ/PZ 8. SorbentFit: A Calibration Tool for Solid Sorbent Reactivity 9. SolventFit: A Calibration Tool for Solvent Based Capture Models
Lake Ann	**Framework for Optimization, Quantification of Uncertainty and Sensitivity** 1. FOQUS Software Framework 2. Uncertainty Quantification and Optimization Under Uncertainty 3. ALAMO 4. Data-Driven Dynamic Reduced Model Builder 5. Data Management Framework: Lite and Full Featured **APC Framework** 6. Advanced Process Control (APC) Framework **Process Modeling Suite** 7. Development of Steady State Process Model for MEA System with Pilot Plant Data 8. Development of Dynamic Process Model for MEA System with Pilot Plant Data 9. Process Modeling – Bubbling Fluidized Bed Reactor 10. Process Modeling – Integrated Solid Sorbent CO_2 Capture Models **Oxycombustion** 20. Oxycombustion Flowsheet Optimization – Boiler and Steam Cycle


Grand Ballroom A
Grand Ballroom BC
Regency Ballroom
Lake Ann
REAR SCREEN
GRAND BALLROOM
CORRIDOR 1
CORRIDOR 2
E
F
G
D
REGENCY BALLROOM FOYER A
REGENCY BALLROOM FOYER B
TERRACE
SOUTH
GRAND BALLROOM FOYER
NORTH
PHONES
CONSERVATORY
COATS
LAKE FAIRFAX
A
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ELEVATORS
MEN
WOMEN
LAKE AUDUBON
LAKE THOREAU
A. SMITH BOWMAN
ROBERT E. SIMON
TOWN CENTER
SOUTH LAKES
NORTH POINT
TALL OAKS
HUNTERS WOODS
RESTON SUITES A
RESTON SUITES B
RESTON FOYER A
RESTON FOYER B
SECOND FLOOR