



# Southern Exposure 2015

NRC SLO Meeting October 27, 2015

**South Carolina Department of Health and Environmental Control**

*Promoting and Protecting the Health of the Public and the Environment*



**South Carolina Department of Health and Environmental Control**  
*Promoting and Protecting the Health of the Public and the Environment*

## **Southern Exposure 2015 (SE15)**

- H.B. Robinson Steam Electric Generating Plant
- FEMA REP Ingestion Pathway Exercise
- Full Federal Participation Exercise
- Almost 2 years of Planning
- Multiple Workgroups
- Multiple Seminars, Workshops and Training



**South Carolina Department of Health and Environmental Control**  
*Promoting and Protecting the Health of the Public and the Environment*

## **SE15 Workgroups**

1. Control and Evaluation
2. Scenario and Simulation
3. External Affairs
4. Public Health and Environment
5. Incident Management
6. Logistics
7. Recovery (Continued discussions post-exercise)



**South Carolina Department of Health and Environmental Control**  
*Promoting and Protecting the Health of the Public and the Environment*

## **SE15 Workshops**

- Nov 20, 2014 - Incident Management Workshop
- May 26, 2015 - Agricultural Workshop
- May 27, 2015 - National Disaster Recovery Framework Workshop
- May 28, 2015 - Price-Anderson Act and Other Funding Mechanisms Workshop



## **SE15 Exercise Dates**

- Feb 10 - Duke Energy TTX
- June 17 - Dress Rehearsal
- July 21-23 - Full Scale Field Activities
- July 23 - TTX (Response/Recovery at 14 Days)
- Sept 9 - TTX (Recovery at 6 Months)
- Sept 10 - TTX (Recovery at 18 Months)
- July 20-24 - WINGS Aerial Response Exercise



## **Plume Phase – Day 1**

- SEOC, Field, & JIC Operations.
- State ESF-10 makes PARs to the Governor, SCEMD and Counties.
- Based on plant conditions and dose projections.
- Gov, SC EMD and Counties determine PADs.
- Field team conducting monitoring activities.



## **Ingestion Phase Days 2-3**

- SEOC, JIC, FRMAC and Operations
- FRMAC products
  - Agriculture Dairy
  - Public Relocation
  - Worker Protection Areas
  - ETC



**South Carolina Department of Health and Environmental Control**  
*Promoting and Protecting the Health of the Public and the Environment*

## **Ingestion Phase Days 2-3**

### **Unified Coordination Group(UCG)**

- 1. FCO**
- 2. SCO**
- 3. DOE**
- 4. Defense Coordinating Officer**
- 5. Nuclear Regulatory Commission**
- 6. EPA**
- 7. Duke Energy**



## Day 3 TTX

- Activities up to Day 14 post-incident
- Breakout groups
  - Unified Coordination Group
  - Return, Reentry & Relocation
  - Environmental & Agricultural Contamination & Mitigation
  - Economic & Infrastructure Effects



**South Carolina Department of Health and Environmental Control**  
*Promoting and Protecting the Health of the Public and the Environment*

## **Event 4 TTXs**

- Activities up to Day 60 & Day 180 post-incident
- Breakout groups based on NDRF RSFs
  - Unified Coordination Group
  - Housing
  - Economic Recovery (Agriculture Focused)



**South Carolina Department of Health and Environmental Control**  
*Promoting and Protecting the Health of the Public and the Environment*

## **After Action Reviews**

- Internal Agency AARs
- FEMA REP Program
- Interagency/FEMA National Exercise Program
- Day 3 TTX (14 Days Post-Incident)
- Recovery TTXs



## **DHEC Activities**

### **Lead:**

#### **ESF-8 Health and Medical**

- Health order for Potassium Iodide Ingestion
- Authorization for Over-Exposure

#### **ESF-10 Hazardous Materials**

- Protective Action Recommendations
- Dose Assessment/Plume Modeling
- Field Monitoring/Sampling
- Laboratory Analysis

### **Support:**

#### **ESF-3 Public Works**

- Drinking Water and Wastewater

#### **ESF-15 Public Information**

- Public Messaging

#### **ESF-17 Animal/Agriculture**

#### **Emergency Response**

- Agriculture (animal and crops)
- Dairy



## Lessons Learned

### Exercise Process:

- Manpower intensive
- Graded REP Exercise vs Federal Participation
  - Separate or transition the activities
- Objectives/Activities vs Exercise Length
  - Three days of field play was not enough



## Lessons Learned

### Field Play:

- Field Team integration with other responders
- Laboratory integration
- IAP development
- Field objectives are dependent on many protective action decisions
- Data entry/sharing



**South Carolina Department of Health and Environmental Control**  
*Promoting and Protecting the Health of the Public and the Environment*

## Lessons Learned

### Technical Response:

- Lots of science vs few scientist responders
- Interpretation of scientific data to non-scientist
- Data products
- Public Messaging



## Lessons Learned

### Command and Coordination:

- SERT vs. UCG
- ICP & IAP: SEOC or Field?
- Agency Authority vs. Coordinated PADs



## Lessons Learned

### Recovery:

- Focused on Housing and Economic (Agriculture)
- Contamination a big issue in both
- Financial considerations affect response/recovery
- Communication of technical information



**South Carolina Department of Health and Environmental Control**  
*Promoting and Protecting the Health of the Public and the Environment*

**THANK YOU!**

**Rick Caldwell, Assistant Bureau Chief  
Bureau of Environmental Health  
Services**

**(803) 896-8995**

**[caldwert@dhec.sc.gov](mailto:caldwert@dhec.sc.gov)**



**South Carolina Department of Health and Environmental Control**  
*Promoting and Protecting the Health of the Public and the Environment*

# CONTACT US

[www.scdhec.gov](http://www.scdhec.gov)

(803) 898-DHEC (3432)



**Follow us on Twitter.**  
[@scdhec](https://twitter.com/scdhec)



**Like us on Facebook.**  
[www.fb.com/scdhec](http://www.fb.com/scdhec)



**Check us out on YouTube.**  
[www.youtube.com/scdhec](http://www.youtube.com/scdhec)