

Westinghouse Columbia Safety Improvement Update

February 6, 2018

Agenda

- Westinghouse Performance Perspective
- S-1030 Scrubber Performance
- Confirmatory Order Status
- Nuclear Safety Culture Improvements
- Management Measures Improvements
- Columbia Excellence Plan
- Developing a Learning Organization
- Closing Remarks

Westinghouse Performance Perspective

- S-1030 scrubber controls have operated effectively for nearly 16 months
- Implemented a disciplined and rigorous approach to completing Confirmatory Order (CO) commitments
- Significant progress made in strengthening our nuclear safety culture and in implementing foundational work to strengthen our management measures
- Strong focus on critical self-assessment and effective learning as we progress on our journey to excellence
- Delivering sustainable, long-term improvement through execution of a comprehensive excellence plan

Westinghouse is committed to the safety of our employees, our operations and our community.



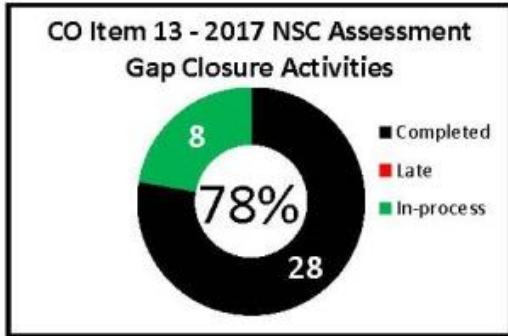
S-1030 Scrubber Performance

- Continued Weekly Inspections
- 6 Full Inspection and Cleanings Since Restart
 - 3 at 6-week frequency
 - 3 at 13-week frequency
- Consistent Results
 - Typical build-up projections ~ 1 kgU/yr. vs limit of 85.7KgU
- Strong emphasis on continuous improvements during inspection activities

New management measures have been consistently effective in preventing chronic mass accumulation.

Confirmatory Order Status

Regulatory Recovery Efforts



Confirmatory Order Items	Work In-process	Work Completed	CFF Objective Evidence Review	WEC Objective Evidence Review	Due Date	NRC Review of Item Closure	Change in Schedule Margin	Effectiveness Assessment
1. Written Corrective Action Statement	█				9/8/2017	IR 2017-004	-	NA
2. Future NSC Survey					8/9/2019		-	NA
3. Reduce Uranium Carry-over	█				8/1/2020		-	
3.1 Engineering Evaluation - Calciner	█				2/9/2019		↓	
3.2 Engineering Evaluation - Blue M Oven	█				2/9/2019		↓	
3.3 Implement Engineering Solutions					8/1/2020		-	
4. Notification process for S-1030 scrubber system changes*	█				8/9/2020		-	Jun-18
5. S-1030 Accumulation Monitoring System	█				8/9/2020		-	
6. Industry Forum Presentation	█				2/9/2019	EA-16-173	-	NA
7. Safety Significant Control (SSC) Database	█				2/9/2019		-	Sep-18
8. Leadership Behaviors	█				2/9/2018		-	Feb-19
9. Criticality Safety Program Metric/Report	█				11/9/2017	IR 2017-009	-	May-18
10. Procedure Improvement Project	█				5/9/2018		-	Sep-18
11. Closure of Open RCA CAPRS	█	█			5/9/2018		↓	Apr-18
CAPR 1	█				7/31/2017		-	Mar-18
CAPR 2	█				4/21/2017	IR 2017-004	-	Feb-18
CAPR 3	█				10/18/2016	IR 2017-004	-	Jan-18
CAPR 4	█				4/28/2017	IR 2017-004	-	Feb-18
CAPR 5	█				10/19/2016	IR 2017-004	-	Jan-18
CAPR 6	█				11/22/2017		-	Mar-18
12. RCA Corrective Action Effectiveness Reviews	█				12/31/2018		-	Jun-18
13. 2017 NSC Assessment Deficiencies Entered into CAP	█				9/8/2017		-	Aug-19
14. Confirmatory Order Closure Letter					11/9/2020		-	NA



Nuclear Safety Culture Improvements

- ✓ **Leader/Worker NSC Behaviors**
- ✓ **Leader Assessments**
- ✓ **Leader Selection Process**
- ✓ **Leader/Worker Training**
- ✓ **NSC Monitoring Panel**
- ✓ **Strengthened Use of Employee Concerns Program**
- ✓ **Independent Third Party NSC Assessment**
- ✓ **Leader Alignment Forums**
- ✓ **Worker Interfaces/Improved Communications**



Nuclear Safety Culture – Leader Behaviors



Nuclear Safety Culture — Employee Behaviors



Strengthening our Management Measures

- Bringing our procedure standards to industry best practices through our procedure upgrade project
- Protecting our safety basis through improved design control and engineering technical rigor
- Improved abilities to find and fix our problems through new leadership values and effective engagement in our corrective action program, metrics and performance improvement activities
- Implemented a robust criticality safety training program

We are invested in the broad strengthening of our management measures.



Columbia Excellence Plan

Ensuring Sustainable, Long-term Improvement

- Leadership alignment on the right values, behaviors and standards
- Program and process rigor to ensure desired, repeatable outcomes
- Well-defined/executed organization roles and responsibilities
- Strong self-identification, intrusive self-monitoring and critical oversight
- Investment in our people and plant equipment
- Industry emulation and engagement
- Effective risk recognition and mitigation

Using a proven approach to bring about sustained performance improvement

Excellence Plan Focus Areas



Performance Monitoring



Operating & Manufacturing Excellence



Asset Management



Organizational Excellence



Safety Excellence



Leadership Alignment & Employee Engagement

Developing a Learning Organization

- ✓ Improving our focus on recognizing and mitigating risk, with improved emphasis on understanding potential consequences
- ✓ Building and preserving safety margins in our solutions
- ✓ Improved focus on organizational and behavioral challenges
- ✓ Implementing appropriately broad extent of condition reviews for important issues
- ✓ Instilling a sense of urgency in mitigating and resolving issues

**Improved focus on learning from issues
to prevent future events**

Summary

- Regulatory commitments are on track and are well-managed to ensure both compliance and effectiveness
- Our excellence plan provides the road map to sustainable safe, reliable and excellent operations
- Transfer of lessons learned with other Westinghouse fuel manufacturing locations
- Corporate assessment and oversight has been strengthened
- Corporate resources support Columbia

Westinghouse is committed to safe fuel manufacturing at Columbia.

