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Nuclear Fuel  
Columbia Fuel Site  
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USA

U. S. Nuclear Regulatory Commission, Region II  
Mr. Marvin D. Sykes, Chief  
Fuel Facility Inspection Branch 3  
Division of Fuel Facility Inspection  
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Our ref: LTR-RAC-10-67

September 29, 2010

**SUBJECT: WESTINGHOUSE ADDITIONAL INFORMATION REGARDING PRE-  
DECISIONAL ENFORCEMENT CONFERENCE (DOCKET 70-1151)**

Dear Mr. Sykes:

Westinghouse Electric Company LLC (Westinghouse) hereby submits additional information pertaining to the pre-decisional enforcement conference held at the Region II office in Atlanta September 24, 2010. Westinghouse requests NRC consider these responses and clarifications in the deliberations pertaining to NRC Inspection Report No. 70-1151/2010-001.

If you have any questions or comments regarding the additional information, please contact me at (803) 647-2045.

Sincerely,

  
Gerard F. Couture, Manager,  
Licensing and Regulatory Programs  
Westinghouse Columbia Fuel Fabrication Facility  
Docket 70-1151, License SNM-1107

Enclosures: Attachment 1- Response to NRC Questions Raised During Enforcement Conference  
Attachment 2- Consolidated Corrective Action Listing

cc: U. S. Nuclear Regulatory Commission  
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**Attachment 1****Additional Information in Response to NRC Questions Raised During Enforcement Conference held on September 24, 2010*****1. Question #1 – What is Westinghouse doing to ensure that Emergency Classification thresholds are more clearly defined for Incident Commanders and Emergency Directors? What is being done to institutionalize these clearly defined thresholds?***

We recognize that in the process of evaluating plant events for Emergency Plan applicability, it is important to distinguish between Abnormal Operating Conditions (AOC) and Emergency Conditions (EC). A failure to do so could introduce unnecessary risk to the Plant population. Therefore, to ensure that these thresholds are more clearly defined for our Incident Commanders and Emergency Directors, we have chosen (for chemical safety related events) to utilize OSHA Permissible Exposure Limits (PELs) as a maximum value to define Abnormal Operating Conditions, and ERPG-2 Limits to define Emergency Conditions. This is consistent with our Site Emergency Plan (SEP) that defines an emergency as “any unusual or potentially unusual event, which may require immediate/urgent response and may affect another area, or may require assistance from additional resources.” The PEL values correspond to allowable eight hour exposure conditions (not immediate/urgent), whereas the ERPG-2 values correspond to one hour exposure limits (reasonably defined as immediate/urgent).

We are institutionalizing this process by beginning all of our chemical spill response checklists with the following standard procedure steps:

- Step 1 – Initiate entry into the response procedure.
- Step 2 – Initiate chemical airborne concentration monitoring. This ensures execution of our first mitigative chemical safety IROFS.
- Step 3 – If the AOC threshold is reached in the area of the spill, affected personnel don appropriate chemical Personal Protective Equipment (PPE). This ensures execution of our second mitigative chemical safety IROFS and ensures that the performance requirements are met for this condition.
- Step 4 – Continue monitoring the airborne chemical concentration, while the spill is cleaned up. This will hopefully eliminate the chemical hazard.
- Step 5 – If the ERPG-2 limit is reached and maintained for 30 minutes (half of the allowable exposure time), or the AOC is reached in an area different from the area where the spill occurred, then Emergency Conditions have been reached and the Emergency Response Organization will be required to execute the remainder of their response procedure, now from a perspective of being in Emergency Response mode. This will include an immediate classification of the event, as well as other appropriate response actions, up to and including evacuation and activation of appropriate alarms and other notifications.
- Checklists to be completed as part of implementation for revised ISAs within the month of October 2010.

**2. *Question #2 – We would like for Westinghouse to clearly articulate the nature of the extent of condition for review of Alarm Response Procedures. What review was performed and what results were obtained?***

As part of the Apparent Cause Analysis performed for the chemical portion of the Q-Tank Event, we did not perform an extent of condition analysis that extended beyond impact to the Conversion Area. However, this event did identify weaknesses in our overall chemical safety analysis for the Integrated Safety Analysis (ISA). The discovery of this weakness was communicated to the NRC as part of our notification process. As a result of the discovery of this gap, we initiated (and completed) a re-evaluation of the chemical hazards present in the Columbia Plant. That evaluation included a review of impacted, or potentially impacted, alarm response processes. The final result of this analysis was that one new alarm response procedure was identified, beyond that already identified for the Conversion Q-Tank system. Other alarm response activities are already captured in existing operating procedures.

**3. *Question #3 – The NRC has concerns over the Westinghouse decision to restart the Conversion Area process without fully understanding the causes of the Q-Tank event. What has Westinghouse done to address this “cultural” issue? What does Westinghouse plan to do to institutionalize an improved management review process?***

Westinghouse acknowledges the NRC’s concern as a valid concern and recognizes that improvements of this sort begin with a fundamental change in management philosophy, followed by a consistent implementation of that change. Westinghouse has always had a management philosophy that requires appropriate reviews prior to restart of systems where IROFS were identified as failed or significantly degraded. However, this philosophy was not institutionalized in a policy or procedure. Therefore, Westinghouse has drafted a “Safety Event Response Process” procedure to address appropriate management review of safety related events, prior to restart of affected processes. This process provides a clear definition of a “Safety Event”, requires a shutdown of the affected process, requires an appropriate resolution completed, identifies corrective actions that must be reviewed and approved by management, and provides for specific, documented management approvals, prior to the commencement of restart activities. For the purposes of this procedure, “management” refers to the Area Manager and an appropriate Plant Staff Manager.

This process is being reviewed by Columbia Plant management during the week of September 27, 2010 for consistency and appropriateness, with the intent of implementing the procedure within the month of October 2010.

**Attachment 2****Consolidated Corrective Action Listing for Enforcement Conference held on  
September 24, 2010**

- All of the following items have been completed to address the CAAS UPS issue:
  - Failed UPS replaced
  - Established more frequent performance of UPS PMs.
  - Additional alarm horns installed and tested.
  - Training for IC's, Security and HP technicians on proper response.
  - Training on CAAS UPS for Maintenance Instrument Technicians.
  - Relabeling of UN pad criticality CAAS related alarm to eliminate confusing "gamma alarm" terminology.
  - Focused training for Conversion Control Room Operators on UN pad criticality alarm.
  - Revised annual Criticality Alarm Training for Plant population for proper response to all CAAS activations.
  - Specific Training for IC's and team leaders on current CAAS and associated response.
  
- The following action is in progress to address the CAAS UPS issue:
  - Modifications to alarm system to interconnect outside units with main system and update applicable drawings. Scheduled completion date of *June 2011*.
  
- All of the following items have been completed to address the Overflow and Response issues:
  - Additional Hi-High Q-Tank Alarm provided.
  - Added Q-Tank pump operation and indication in Control Room.
  - Installed increased horsepower pump motors (complete A and C pumps).
  - Developed Alarm Response Procedure and completed training for Conversion Control Room personnel on proper response.
  - Additional spill response checklists for use by IC's developed, issued, and training conducted.
  - Additional ammonia detection devices procured and placed in service.
  - Additional guidance for proper PPE selection generated and training conducted.
  - Enhanced training process for IC's for proper chemical related emergency response.
  - Additional "all in one" respirators procured and placed in service.
  
- The following actions are in progress to address the Overflow and Response issues:
  - Develop and implement formal policy on appropriate management review of production process restart activities following a safety event. Scheduled completion date of *October 2010*.
  - Increase operational filter differential pressure monitoring and change out frequency. Scheduled completion date of *March 2011*.

- Provide more reliable pump and seal design effort with pilot. Scheduled completion date of *June 2011*.
  - Install differential pressure transmitters on filters with alarms to replace local gauges. Scheduled completion date of *June 2011*.
  - Develop and implement a program for selection, qualification and performance management of Incident Commanders and Emergency Directors. Scheduled completion date of *December 2010*.
  - Install Passive tank equalization lines. Scheduled completion date of *December 2011*.
  - Provide deviation alarm for existing Q-Tank level transmitters. Scheduled completion date of *January 2012*.
  - Automated shutdown of conversion line inputs upon detection of solution in passive tank equalization lines. Scheduled completion date of *December 2012*.
- All of the following items have been completed to address the Inadequate ISA issue:
    - Revised procedures for Process Hazards Analysis performance.
    - Re-evaluation of potential consequences from chemical hazards in NRC regulated processes.
    - Detailed analysis performed by consulting firm to evaluate source terms of interest by process chemical.
    - Scoping calculations to validate chemical related consequences meet performance requirements for public receptors.
    - Procured monitoring capability for chemicals of interest for use by responders.
    - Established mechanical integrity PMs for vessels, piping systems selected as IROFS.
    - Revised ISAs and Summaries with designation of IROFS as necessary to comply with performance requirements:
      - Conversion and Conversion Scrap Processing,
      - Solvent Extraction,
      - Wastewater Treatment.
  - The following actions are in progress to address the Overflow and Response issues:
    - Implementation of revised ISAs in progress with scheduled completion of October 2010.