

LICENSEE PERFORMANCE REVIEW FOR WESTINGHOUSE ELECTRIC COMPANY

ASSESSMENT PERIOD: January 1, 1996 - January 31, 1998

A. SAFETY OPERATIONS (Comprised of Criticality Safety, Plant Operations, F Safety, and Management Controls)

Program Strengths

- The Fire Safety program is effective and comprehensive.
 - The Fire Safety program was deemed to be well managed and effective in the prevention of fires (IR 97-05). It was also identified as well defined, comprehensive and pro-active (IR 96-02).
- Computerized procedure control system assures that only the proper revision is available to workers (IR 97-05).

Areas Needing Improvement

- Ensuring that adequate safety evaluations are conducted and that criticality controls are adequately implemented and maintained in accordance with license safety requirements
 - An engineered control (pH meters on UNH tanks) was replaced with an administrative control (periodic sampling and analysis for pH) susceptible to a common mode failure without obtaining the approval of Westinghouse's Regulatory Affairs organization or revising the Criticality Safety Evaluations (IR 96-202).
 - The licensee failed to assure (functionally verify) that the as-built configuration of two groups of components matched the design assumptions for favorable geometry (granulator hoppers and the ventilation system moisture dropout tanks) (IR 97-205). Resulted in violation failure to get Regulatory Affairs Approval before the change was made (got it 30 days after change).
 - Several failures to conduct technically adequate safety evaluation and the failure of the independent reviews to identify those errors were identified (IR 97-205).
- Developing and executing procedures and policies that implement the criticality safety license conditions
 - Numerous examples where safety criteria and requirements contained Chapter 6 of the license were not addressed in approved implementation procedures or policies were identified in IR 97-205. Received critical engineer approval. This was to be a temporary change, but ...
 - controls were not fully identified or in surveillance program (?)
 - staff was not aware of what the NCS controls were (?)

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- failed to conduct CSE for pH meter removal. Introduced a common m failure (96-202, p. 6 Violation)
- CSE for centrifuge bowl not consider... (97-03)
 - CSE for UF6 operations had outdated controls and some controls were not in the procedure but were in the CSE (97-3)
 - assumptions in CSEs were not controlled in operations (?)
- Developing or implementing of various procedures and policies that cc certain license requirements
 - In response to finding candy or gum wrappers in the controlled area (IR 97-01) the licensee subsequently deleted the procedural requirement prohibiting eating in controlled areas (IR 97-05).
 - Management expectations (criticality safety manual) have not been developed to implement the requirements of License Application Chapter 6 relative to Nuclear Criticality Safety (IR 97-205).
 - Adequate procedures were not provided for non-routine activities involving the handling and testing of lead-filled rods - led to shipment of rods containing uranium even though they were not supposed to contain uranium (IR 97-203).
 - Facility notification procedures did not include references to the 24-hour reporting requirements in 10 CFR 20.2202, 70.22 and 70.50 (97-202), nor did they address Bulletin 91-01 notification commitment made by the licensee in their letter of August 14, 1996 (IR 97-205)
 - No mechanism was established to assure that the Plant Emergency Procedures were approved by Westinghouse's Regulatory Component Manager prior to issuance and use (IR 97-202).
 - Action levels for certain environmental samples were not specified procedures as required by Section 10.4.1 of the license application (IR 98-01).
 - Inconsistencies and lack of the proper regulatory references in the MCC shipping package preparation procedures indicated that a more thorough technical review of the procedures was warranted (IR 97-0)
 - The procedure for deleting PMs from MAPCON did not have any tie-in to the regulatory affairs organization; thus PMs for safety related systems could be deleted without any regulatory involvement - safe geometry dissolvers and incinerator (IR 98-02).
 - Contradictions between the maintenance instructions in Operating procedures and MAPCON procedures have been discovered (IR 98-02).

- The Emergency Drill procedure was found to be inadequate in that it contained inconsistencies with other emergency procedures and the site Emergency Plan (IR 97-05).
- **Thoroughness and timeliness of Incident Investigations and Root Cause Analyses**
 - Management oversight of incident investigations was inadequate to thoroughly identify root causes and take timely corrective actions failure to act on 7 day reports and failure to promptly review nonfavorable geometry findings (IRs 97-201 and 97-205).
- **Implementing an effective surveillance, audit and self-assessment program**
 - The licensee had an ineffective feedback mechanism to assure adequate implementation of license requirements. Further, no formal audit was conducted to assure that the requirements in the renewed license (1995) were actually implemented in that procedures were not reviewed and procedural implementation was not audited (IR 96-204).
 - Violation for audit not reviewing procedure adequacy and operation no documentation of purpose or objective of audits, no procedures to conduct audits.
- The annual independent audit was not conducted as required by the Site Emergency Plan during 1995, and the auditor did not have prior emergency preparedness experience as discussed in the Plan (IR 96-03).
- The Site Emergency Plan audit for 1996 lacked depth and thoroughness due to the lack of guidance provided the auditor, duration of the audit, the auditor's knowledge of the licensee's program (IR 97-05).
- Incomplete documentation of corrective actions to audit findings (97-4)
- RP audit - no purpose and done by reg engineer responsible for the audit (97-4)
- Annual ALARA report did not discuss groundwater results when results were increased (97-4)
- **Developing and implementing the Configuration Control program**
 - Written documentation for completing all aspects of modification projects were not required by configuration control procedure (IR 97-02).
 - Various drawings, loop sheets, and schematics were not updated as required by licensee procedure - Violation (IR 97-03).

- Removal of pH monitors from part of a safety system was performed month before final approvals were received - Violation pp 5, 6 (IR 96-202).
- **Management control over routine and non-routine activities**
 - Failure to provide adequate management controls over new or non-routine activities, especially in the areas of training and procedures to control work activity associated with the inadvertent shipment of two fuel rods in a replica assembly to the Czech Republic (IR 97-203).
 - Management and quality controls to remove from service fuel shipping containers with expired certifications were less than adequate for reinspecting two model MCC fuel shipping containers within the required five year frequency - Violation (IR 97-01).
 - Issues of quality control problems in fuel shipping package preparations were identified (IR 96-01).
 - Vogtle identified 3/4 inch combination wrench at the bottom of an MCC container
 - Vogtle discovered a rubber washer used in the hold down mechanism for fuel within a shipping container came loose and was lodged in the fuel.
- **Document Control activities for maintaining required records**
 - A criticality safety evaluation that constituted part of the safety basis for the granulator hopper was lost (IR 97-205).
 - Scale calibration records were lost and a system review was needed for MC&A records storage and retention (IR 96-203).
 - Operator training records were lost and had to be reconstituted. The records were used to demonstrate which jobs several new operators had been qualified to perform on their own without supervisory oversight (IR 97-206).
 - The records of personnel needing training in measurements and measurement control were not adequately controlled as the Traffic Manager had no measurement control test on file to show that individuals had received required training (IR 97-201).

Projected Challenges to Performance

- Implementing the extensive corrective actions identified to address the causes of violation identified in inspection report 97-205
- Developing a comprehensive understanding of license requirements and

documenting the implementation mechanisms to assure consistency throughout future staffing consistent implementation as staff changes

- Updating the Criticality Safety Evaluations (CSEs) affecting plant operations
- Keeping the Pre-Fire Plan updated
 - The Pre-Fire Plan does not detail the location of certain equipment such as vents, dampers and electrical control boxes (IR 97-05). Recent staff changes also need to be reflected in the Plan.
- Significant numbers of procedures, policies and training media to be developed and implemented to assure that management's expectations are being met
- ~~Full implementation of the Regulatory Process Review Committee's goal and objectives~~
- ~~Continuation of the timeliness and openness of communications to NRC followup to safety events~~
 - ~~The licensee has not taken advantage of NRC personnel visiting the site during concurrent safety events.~~
- ~~• Full implementation of the Regulatory Process Review Committee's goal and objectives.~~
- ~~• Timeliness and openness of communications to NRC and followup to safety events~~
- ~~• The licensee has not taken advantage of NRC personnel visiting the site during concurrent safety events.~~

Recommended NRC Effort

- Maintain core inspection program in chemical safety and plant operations, maintain core inspection effort in fire protection (following baselining of program by NMSS); increase the NRC inspection effort Nuclear Criticality Safety over core for nuclear criticality safety with emphasis on the above problem areas, and increase the inspection effort over core in management controls with emphasis in correcting the areas needing improvement.

B. SAFEGUARDS (Comprised of Material Control and Accountability and Physic Security)

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C. RADIOLOGICAL CONTROLS (Comprised of Radiation Protection, Environmental Protection, Waste Management, and Transportation)

Program Strengths

- Maintaining occupational doses as Low As Reasonably Achievable (ALARA)
 - The collective worker doses, maximum assigned TEDE, and the number employees exceeding the ALARA goal of two rem have decreased each

the past three years and doses to the public are low (IRs 96-03, 98-01, and 98-01).

- Licensee staff tracked administrative limit exceedences of stack releases in 1997, identified the trend to management, and subsequently the associated filtration system was placed on a facility improvement list for replacement (IR 98-01).
- **Maintaining decommissioning records**
 - Decommissioning records and filing system were well maintained, organized, and detailed (IR 98-01).
- **Successful waste minimization program**
 - Effective decontamination and volume reduction operations that minimized the quantities of solid radioactive waste for disposal (IR 96-03).

Areas Needing Improvement

- None

Projected Challenges to Performance

- **Maintaining stack sample delivery system representativeness**
 - Use of tygon tubing for sample delivery lines which were subject to degradation from harsh environments and 90 degree bends (IRs 97-04 and 98-01).
 - Excessive moisture in sample delivery lines and flowmeters (IR 98-01).
- ~~Developing an effective investigation for~~ **Investigation of source of apparent groundwater contamination and corrective actions**
 - Elevated gross beta activity was detected in certain groundwater monitoring wells near the waste treatment area from the last half of 1996 through the first three quarters of 1997 (IRs 97-04 and 98-01).
- **Reducing the concentrations of uranium released in the liquid effluent**
 - The annual running average of gross alpha concentrations in the liquid effluent discharged to the Congaree River was greater than effluent concentration limit [425 verses 300 pCi/l] (IR 98-01).

Recommended NRC Effort

- In radiation protection and waste management, maintain core inspec

effort with some reduction in on site hours. In environmental protection and transportation, maintain core inspection program with reduction in on site hours.

D. FACILITY SUPPORT (Comprised of Maintenance and Surveillance, Emergency Preparedness, and Training)

Program Strengths

- **Providing good safety training programs and materials**
 - The licensee has implemented an extensive chemical safety training program (IR 97-202).
 - The operational safety training material was well produced and covered all required areas (ALARA, Radiation protection, etc.) (IR 97-05).
 - The fire safety training program was thorough and well implemented (IR 96-02).
 - The training and qualification of Emergency Brigade members was adequate and extensive (IR 96-02).
- **Providing specialized transportation training**
 - Licensee management was committed to providing specialized training to traffic and shipping specialist to ensure a current knowledge of DOT regulations (IR 96-01).
- **Providing thorough Emergency Preparedness training**
 - The Self-Contained Breathing Apparatus training involved both class instructions and performance by students demonstrating the proper donning and use of equipment (IR 96-03).
 - Personnel performance during walkthroughs demonstrated that training provided was adequate in accident assessment and classification (IR 96-03).
 - The number of trained personnel for staffing key Emergency Response Organization (ERO) positions was adequate (IR 96-03).
- **Realistic emergency drills**
 - Realistic drills were conducted for chemical releases/problems (IR 97-202).
 - The participation of the offsite responders in fire safety exercises was favorably noted as was the presence of Fire Brigade members on

backshifts (IRs 96-02 and 97-05).

- The emergency exercise scenario posed numerous challenges not previously postulated (IR 97-05).

Areas Needing Improvement

- **Using the computerized Maintenance Planning and Control (MAPCON) syst**
 - The licensee's system for programmed maintenance does not include safety-related systems and components identified in the Criticality Safety Evaluations (IRs 97-02 and 98-02).
 - The licensee missed seven of twelve required inspections of the ventilation system in 1997 due to poor implementation of the MAPCON automated notification system (IR 98-02).
- **Ensuring proper training on MC&A requirements**
 - The Material Service Attendant (MSA) First Level Manager did not assure that MSA personnel received proper training with regard to use of a Mechanical Operating Procedure and implementation of the day report requirements (IR 97-203).
 - The formal training program did not document the required training received by an MSA in order for the person to qualify for the position (IR 97-203).
- **ERO Activation and Staffing during off-hours**
 - Minimum staffing for the Emergency Operations Center (EOC) during off-hours had not been identified (IR 96-03).
 - A drill determining the availability of ERO staff during off-hours and an estimated time of arrival to the EOC had not been performed recently (IR 96-03).
- **Outdated emergency meteorological tower facility**
 - The onsite meteorological capability is archaic and possibly inadequate based on the design and its capability to withstand certain environmental influences (IR 97-05).

Projected Challenges to Performance

- **Completion of the ISA and integration of these results into licensee procedures and MAPCON.**
- **Identification and clarification of PM requirements to ensure these are supported by procedure.**

- **Small Emergency Operations Center**

Recommended NRC Effort

- **Maintain core inspection effort in all areas of facility support**

E. SPECIAL TOPICS (LICENSING ACTIVITIES)

Program Strengths

- **Proactive in revising and updating its FNMC Plan to incorporate improvements in its MC&A program**
 - The licensee's MC&A staff is proactive in updating the FNMCP every six months.

Areas Needing Improvement

- **None**

Projected Challenges to Performance

- **Continued development of the Integrated Safety Analysis**
 - During the Westinghouse development of the CSE/CSAs the licensee staff has underestimated the amount of effort to develop their ISA
- **Maintaining competency in technical staffing**
 - The licensee has undergone staffing changes and downsizing.
- **Integration of technical and management oversight for resolution of safety issues**

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