



Westinghouse

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Westinghouse Electric Company LLC
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USA

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Safeguards
U. S. Nuclear Regulatory Commission
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Our ref: LTR-RAC-10-39
June 9, 2010

SUBJECT: WESTINGHOUSE REPORTED EVENT 30 DAY FOLLOW UP REPORT

The following information is being provided by Westinghouse Electric Company LLC (Westinghouse) in accordance with 10CFR70.50(c)(2). A summary of the initial notification report, Event Report #45919, pertaining to the Columbia Fuel Fabrication Facility (CFFF) is attached and provides the applicable information required by 10CFR70.50(c)(1). The attachment also documents the additional information required in accordance with 10CFR70.50(c)(2).

Please know that Westinghouse remains deeply committed to continuous compliance with all NPDES requirements, as Westinghouse management has specified that it is unacceptable to have *any* permit limit violations. If you have any questions regarding this report, please contact me at (803) 647-2045.

Sincerely,

Gerard F. Couture, Manager
Licensing & Regulatory Programs
Westinghouse Columbia Fuel Fabrication Facility
Docket No. 70-1151, License No. SNM-1107

Attachment

cc: U. S. Nuclear Regulatory Commission, Region II
Attn. Mr. Richard Gibson
Atlanta Federal Center
245 Peachtree Center Ave., NE, Suite 1200
Atlanta, Georgia 30303-1257

U. S. Nuclear Regulatory Commission
Attn: Christopher Ryder, Project Manager
Mail Stop: EBB 2C40M
One White Flint North
11555 Rockville Pike
Rockville, Maryland 20852-2738

South Carolina - Department of Health and Environmental Control
Attn: Susan Jenkins, Assistant Director
Division of Waste Management
Bureau of Land and Waste Management
2600 Bull Street
Columbia, SC 29201-1708

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NRC Notification Summary of May 12, 2010
Event Report # 45919 at 1347 EST

Facility

Westinghouse Electric Company LLC (Westinghouse), Commercial Fuel Fabrication Facility, (CFFF)
Columbia SC, low enriched (≤ 5.0 wt.% U-235) fuel fabricator for commercial light water reactors.
License: SNM-1107.

Time and Date of Event

May 12, 2010, approximately 12:20

Reason For Notification

On May 11, 2010, Westinghouse reviewed the vendor chemical laboratory analysis for the Total Suspended Solids (TSS) parameter result for the April 28, 2010, NPDES liquid effluent 24-hour composite sample. The sample result indicated that the wastewater discharged from the Westinghouse Columbia plant to the Congaree River during the 24-hour period preceding the April 28th sampling contained 93.16 pounds of TSS, which exceeds the Daily Maximum permit limit of 64.0 pounds per day. The April 28, 2010 result also produced a Monthly Average of 46.39 pounds, which exceeds the Monthly Average permit limit of 32.0 pounds per day. Investigation regarding the cause of this high TSS result is still ongoing.

Liquid discharges from the Columbia Plant are regulated with regard to chemical pollutants through the SC-DHEC/EPA administered NPDES permit SC#0001848. WEC is required to notify SC-DHEC of non-compliance conditions which exceed any effluent limitation.

Notification to NRC is being made based on 10 CFR70 Appendix A, Section (c) Concurrent Reports:

“Any event or situation, related to the health and safety of the public or onsite personnel, or protection of the environment, for which a news release is planned or notification to other government agencies has been or will be made shall be reported to the NRC Operations Center concurrent to the news release or other notification.”

As Found Condition

See reason for notification.

Summary of Activity

- Liquid effluent discharges are temporarily halted while reviews are being conducted.
- The event will be entered into the plant's Corrective Action Process and a thorough review will be performed to identify the cause of the event.

Conclusions

- The problem was identified by Westinghouse personnel.
- At no time was the health or safety to any employee or member of the public in jeopardy.
- SC-DHEC has been notified.

10CFR70.50 (c)(2) Information:

(2) Written report. Each licensee that makes a report required by paragraph (a) or (b) of this section, or by § 70.74 and Appendix A of this part, if applicable, shall submit a written follow-up report within 30 days of the initial report. Written reports prepared pursuant to other regulations may be submitted to fulfill this requirement if the report contains all the necessary information, and the appropriate distribution is made. These written reports must be sent to the NRC's Document Control Desk, using an appropriate method listed in § 70.5(a), with a copy to the appropriate NRC regional office listed in appendix D to part 20 of this chapter. The reports must include the following:

(i) Complete applicable information required by § 70.50(c)(1);

This information has been provided above.

(ii) The probable cause of the event, including all factors that contributed to the event and the manufacturer and model number (if applicable) of any equipment that failed or malfunctioned;

Following recognition of the problem on May 11, 2010, Westinghouse immediately responded to evaluate possible causes of the total suspended solids (TSS) problem through performance of an Apparent Cause Analysis (ACA).

Upon review the May 5th and May 12th effluent analysis results for TSS continued to show a high trend. River discharges were kept at a minimum to ensure discharges complied with permit requirements. Therefore, before the May 19th sampling, the final holding tank was drained and inspected. A significant amount of algae was cleaned from the tank. Consequently, May 19th TSS results were low, 13 mg/L. Therefore, it has been determined that this final tank needed cleaning, and was the first cause for this violation.

The second cause was determined to be the addition of caustic which precipitated solids in the lift station where the North and South Lagoon effluent combine with the Sanitary Lagoon. The North and South Lagoons are filled with the East and West Lagoons. The West Lagoon consistently has a pH of 10. The pH in the East Lagoon may vary and cause stratification of pH levels in North and South Lagoons. During a brief period of the April 28 discharge, we saw a low pH spike in the final aerator that was adjusted with caustic. We hypothesize that the caustic addition caused solids to precipitate out of solution. The effluent composite receives an aliquot of effluent after every 2,300 gallons. We believe the composite grabbed a high TSS-laden aliquot, and this is not representative of the whole discharge.

It was also discovered that a sulfuric acid tote used for pH adjustment of discharged effluent had leaked into the East lagoon. The PVC nozzle on the tote had cracked causing the leak.

(iii) Corrective actions taken or planned to prevent occurrence of similar or identical events in the future and the results of any evaluations or assessments;

Corrective Actions:

Immediate corrective actions taken are as follows:

- Control East lagoon pH.
- Isolation valve for sulfuric acid tote dike is now visible and closed.
- Hose connection to sulfuric acid tote is now supported.

- EPA sample line has been cleaned and flushed out.
- Lift Station, Final Aerator and Round Tank have been examined and cleaned as necessary.
- Install a controlled metering system for caustic addition.
- Instead of being inspected and cleaned annually, the final discharge tank will be inspected weekly and cleaned as needed.

Long-term corrective actions planned:

- Examine the possibility of utilizing a flocculating agent in the West lagoon to drop out solids.
- Install a controlled metering system for caustic addition.
- Determine pH level in East Lagoon that allows sediment to dissolve into solution.
- Control pH conditions in East Lagoon above this level
- Explore the use of continuous on-line monitors to analyze TSS and ammonia.
- Evaluate and implement a system to control algae growth in lagoons.
- Evaluate need and perform clean out operations on the North and South Lagoons.
- Modify procedure to require aeration in the North and South lagoons when lagoons are expected to remain idle.
- The above actions will be tracked to completion by management in accordance with the corrective action process.

Extent of condition related actions:

Additional action items that have arisen and will be implemented are as follows:

- Proceduralize an action level for EH&S to engage Production based on TSS mg/L results.
- Certify our on-site Chemical Laboratory through SC-DHEC for TSS analysis, which will allow CFFF to receive TSS results more quickly than through use of an off-site vendor laboratory.
- Until CFFF on-site laboratory acquires TSS certification, TSS results will be prioritized by our off-site vendor laboratory for delivery of results within 24 hours.
- The above actions will be tracked to completion by management in accordance with the corrective action process.

(iv) For licensees subject to Subpart H of this part, whether the event was identified and evaluated in the Integrated Safety Analysis.

The Columbia Fuel Fabrication Facility is subject to Subpart H. The SNM 1107 License Application, Section 10.1.2 discusses the Liquid Waste Treatment systems and is also noted in the Site and Structures Integrated Safety Analysis. The lagoons and water liquid waste discharge are not a process area addressed for compliance with Subpart H as the controls for compliance with Subpart H are contained within the Main Facility Building and the Advanced Wastewater Treatment Facility which are addressed in ISA-15. Total Suspended Solids is a requirement of the site NPDES permit.