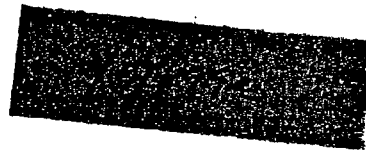


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WESTINGHOUSE BRIEFING MATERIALS

Tab 1: General Information and Maps



Information in this record was deleted  
in accordance with the Freedom of Information  
Act, exemptions 4  
FOIA-2006-0026

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**Licensee Name:** Westinghouse Electric Company LLC (WELCO)  
P.O. Box 355  
Pittsburgh, Pennsylvania 15230-0355  
(803) 776-2610

**Site:** Westinghouse Commercial Nuclear Fuel Division  
Westinghouse Columbia Plant  
Bluff Road (S.C. State Route 48)  
Columbia, South Carolina 29250

**Site Description:** The Westinghouse Columbia Plant is located 8 miles southeast of Columbia, South Carolina. The plant is situated on approximately 1,158 acres in Richland County with only 60 acres developed to accommodate the fuel fabrication facilities, holding ponds, and landscaped areas. The region around the site is sparsely settled, and the land is characterized by timbered tracts and swampy areas, penetrated by unimproved roads.

**Directions to Site:** [Note: Maps are included at the end of this section]

From the Columbia airport:  
Take Airport Blvd which leaves the airport and turns left to follow Route 302. After about 1 mile, turn right onto Interstate 26 South (towards Charleston). Go about 2 miles on I-26 and merge left onto I-77 North toward Charlotte. After about 4 miles on I-77, take the Bluff Road (Hwy 48) exit. Turn right onto Bluff Road and continue for about 8 miles to the Westinghouse Columbia plant. Turn right into the entrance and continue to the Visitor's parking area.

**Location of Meeting:** Main conference room. A facility tour will follow.

**NMSS Contact:** J. R. (Jack) Davis, (301) 415-7256, Technical Assistant to E. Q.  
(Liz) Ten Eyck, Director, Division of Fuel Cycle Safety and Safeguards  
(FCSS)

**NRC Responsible Region:** Region II, Atlanta, Georgia  
L. A. (Luis) Reyes, Regional Administrator, (404) 562-4410  
J. R. (Jon) Johnson, Deputy Regional Administrator,  
(404) 562-4411

**Division of Nuclear Safety  
Materials Safety:** D. M. (Doug) Collins, Director, Division of Nuclear Materials  
(DNMS), (404) 562-4700  
C. M. (Chuck) Hosey, Deputy Director, DNMS, (404) 562-4701  
E. J. (Ed) McAlpine, Chief, Fuel Facilities Branch (FFB), DNMS,  
(404) 562-4711

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**Agreement State:** Virgil R. Autry, Director  
 Division of Radioactive Waste Management  
 South Carolina Department of Health and Environmental Control  
 2600 Bull Street  
 Columbia, SC 29201

**Report Coordination:** D. A. (David) Ayres, Senior Fuel Facilities Inspector, FFB, DNMS,  
 (404) 562-4718

#### Management Data

**Site:** J. A. (Jim) Fici, Senior Vice President and General Manager  
 J. B. (Jack) Allen, Manager, Columbia Plant  
 D. C. (Don) Goldbach, Manager, Regulatory Affairs  
 J. R. (Jim) Bush, Manager, Manufacturing  
 S. G. (Sam) McDonald, Manager, Technical Services  
 E. E. (Ed) Keelen, Manager, Quality Assurance  
 G. (Gregory) Davis, Manager, Materials and Planning  
 A. F. (Andrew) Kaminsky, Manager, Human Resources

**Organization:** See Tab 7 for organization and biographies of key personnel

**Licensed Activities:** This licensee primarily manufactures fuel assemblies for commercial nuclear reactors. Operations include conversion of up to 5% enriched uranium hexafluoride to uranium dioxide powder via the Ammonium Diuranate (ADU) process. The uranium dioxide powder is pelletized and loaded into fuel rods. Fuel rods are fabricated into assemblies and shipped to various locations. The licensee is also authorized to process uranium powder through a dry process called the Integrated Dry Route (IDR). The IDR process has been mothballed due to its lack of capacity to satisfy fuel demand. In addition to standard fuel production, Westinghouse processes certain quantities of pellets through a boron coating process to produce Integral Fuel Burnable Absorber (IFBA) rods. Other licensed activities support fuel manufacturing and include uranium storage, scrap recovery, solvent extraction, waste disposal systems, and laboratory services.

Possession Limits:

Ex. 4

Workforce Data:

Ex. 4

#### HISTORICAL INFORMATION

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**Licensing:**

The facility operates under an active NRC license that expires on November 30, 2005. There are two license amendments pending as of November 1, 1999. These amendments concern changes to the License Application and the Fundamental Nuclear Material Control Plan in order to update the licensee's organizational structure, address inaccuracies discovered by NRC inspectors, and to allow possession and use of uranium in the form of uranyl nitrate hexahydrate (UNH) crystals as a potential input material (in addition to uranium hexafluoride).

**Inspection:**

See Tab 9 for the executive summaries of inspection reports issued since the last Licensee Performance Review (LPR).

The most recent inspection involved the observation and evaluation of the licensee's biennial emergency response exercise. See Tab 3 for copies of the latest inspection reports. The licensee's response to the postulated accident was considered a successful demonstration of the licensee's response capability to protect the health and safety of plant workers and the public.

A good working relationship exists between licensee management and local and state officials. Emergency plan changes are coordinated with appropriate offsite response agencies. Certain offsite agencies (fire department and emergency medical services) have participated in drills at the facility.

Financial assurance for the decommissioning of the site is provided by letters of credit issued March 12, 1999 from Chase Manhattan and ABN AMRO bank.

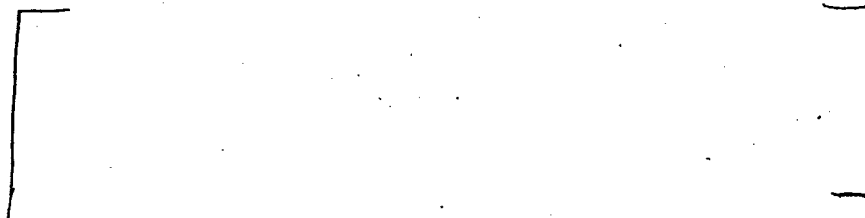
**Enforcement:**

Escalated enforcement action was taken in January 1998 for a series of criticality control violations occurring during 1997. A civil penalty of \$13,750 was assessed for the SL III citation. In addition, eight SL IV and two non-cited violations (NCVs) were issued from October 1, 1997 to November 1, 1999. Please see Tab 4 for a listing of these violations. Currently, one incident involving an apparent licensee-identified willful violation is under review by the Region II Office of Investigation.

### CURRENT INFORMATION

**Licensee:**

Please see Tab 10 for descriptions of recent reportable events.



Ex 4

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The licensee operates four main parallel powder and pellet production lines. A fifth powder production line is used almost exclusively to recycle uranium from scrap recovery systems back into the product stream. A fifth pellet line is normally used for small runs of specialty pellets, most notably for the production of annular pellets. Westinghouse remains as the only licensee that continues to produce powder via the "wet" ammonium diuranate process. Westinghouse is also unique in that it produces boron coated pellets for its Integral Fuel Burnable Absorber (IFBA) rods. Orders for these boron coated pellets are increasing, prompting Westinghouse to install additional coating equipment to meet the demand for this product.



**Generic:**

A generic issue associated with this type of facility include the focus on revising 10 CFR Part 70 and its accompanying guidance documents concerning the scope of performing an Integrated Safety Analysis (ISA). Most facilities (including Westinghouse) have already expended resources to produce ISAs in advance of the Part 70 requirements. Another generic issue involves the re-engineering of the NRC inspection program. Westinghouse representatives have been very active in attending NRC-sponsored meetings concerning this issue. Financial pressure in a highly competitive market is also a generic issue throughout the industry.

**Other:**

There is normally very little media interest in this facility. However, as a result of the Tokai incident, 6 media teams toured Columbia Plant September 30, 1999, and October 1, 1999, hosted by Plant Manager Jack Allen. Media representatives included CNN, CBS National, NBC National, and the Local ABC, CBS and NBC affiliates. Please see Tab 5 for recent news

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articles.

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TAB 2: License

A copy of license SNM-1107, Amendment 19 dated May 3, 1999, is placed here.

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TAB 3: Recent Inspection Reports

Copies of inspection reports 70-1151/99-05 and 70-1151/99-203 are placed here.



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### TAB 4: Recent Enforcement

#### SUMMARY OF VIOLATIONS SINCE AUGUST 1, 1997

**8/29/97 -** Seven violations were identified in inspection report 97-205 concerning numerous inadequacies in the licensee's criticality control systems. These violations were grouped into a single SL III violation and resulted in a civil penalty. The specific violations included:

1. Inadequate incident investigations,
2. Failure to conduct adequate criticality safety evaluations for each significant portion of a process to identify the specific controls necessary to assure safe operation, and incorporate those controls into the process design criteria documentation,
3. Failure to functionally verify that controls identified as necessary for the safe operation of a process were installed to match the requirements identified in the design criteria,
4. Failure to update Criticality Safety Evaluations to assure that all assumptions, including credible upset conditions, are justified, documented and independently reviewed,
5. Failure to control Nuclear Criticality Safety Evaluations, Analyses and Methodology Validations in accordance with written procedures that specify the management program for licensed activity records, and maintain those records for the life of the facility,
6. Failure to notify the NRC Operations Center within four hours of the determination that a criticality safety analysis or evaluation was deficient and that double contingency protection, in fact, does not exist, and
7. Failure to develop or implement nuclear criticality safety procedures and policies that identify the requirements for implementation of applicable NRC regulations and license conditions.

**9/26/97 -** Weaknesses during an emergency exercise that require licensee response and corrective action were identified in inspection report 97-05. These included:

1. Failure to activate a bomb search team in accordance with procedures,
2. Failure to initiate search, and provide medical attention for the missing injured employee,
3. Untimely response by security personnel to unlock the south gate.

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- 1/16/98 - NOV 97-01-02 issued for failure to follow procedure and Non-Cited Violation identified for failure to establish action levels by procedure for certain environmental samples.
- 1/30/98 - NOV 98-02-02 issued for several examples of failure to follow required work controls.
- 5/1/98 - NOV 98-202-04 issued for operation of an ammonia scrubber for nearly one year with an inoperable nuclear safety control.
- 5/8/98 - NOV 98-201-02 issued for failure to maintain current knowledge of a drum of contaminated fuel rod tubing.
- 6/4/98 - NOV 98-04-02 issued for failure to escort commercial vehicle and its driver while on site and NOV 98-04-03 issued for not reporting changes to the plant Physical Security Plan in a timely manner.
- 6/26/98 - NOV 98-203-04 issued for failure to perform an independent review of criticality safety calculations that support solvent extraction.
- 8/7/98 - NOV 98-06-01 issued for failure to provide adequate safety training to three individuals working in a nuclear material access area.
- 11/13/98 - Non-Cited Violation 98-09-02 identified for failure to follow procedure and loss of configuration control with regard to a pellet accumulation event.
- 12/11/98 - NOV 98-10-03 issued for failure to remove cracked sintering boats from service, and NOV 98-10-04 issued for shipment of a damaged LLW drum to burial site.
- 2/5/99 - Non-Cited Violation 99-01-03 identified for failure to follow procedures while performing hot work in the uranium recovery and recycle system cutting room.

**LIMITED OFFICIAL USE ONLY****Tab 5: News Articles and Press Releases**

The following articles are placed under this tab.

NuclearFuel dated 9/6/99, pg 14, "Westinghouse Looks To Ship Fuel To Eskom"

NuclearFuel dated 8/9/99, pg 11, "Point Beach Plans To Switch To New Westinghouse Fuel Design"

NuclearFuel dated 7/26/99, pg 11, "As Step To Privatization, U.K. Wants BNFL's U.S. Companies To Up Profits"

NuclearFuel dated 6/28/99, pg 14, last paragraph from "Ukraine Still Suffering From Lack Of Fresh Fuel"

NuclearFuel dated 5/3/99, pg 7, "Problems Removing Twice-Burned Fuel At Summer Extend Refueling Outage"

NuclearFuel dated 11/2/98, pg 7, "Virginia Power, Westinghouse Looking Into Fuel Facilities"

NuclearFuel dated 5/4/98, pg 12, "NRC Review At Westinghouse Fuel Plant Nets Okay Marks, More Criticality Exams"

NuclearFuel dated 5/4/98, pg 15, "Westinghouse Wants To Send Fuel to China"

NuclearFuel dated 1/12/98, pg 10, "Criticality Concerns Trigger NRC Action At Westinghouse Fuel Fabrication Plant"

NuclearFuel dated 11/3/97, pg 2, "Westinghouse Data Suggest IFBA Rods May Not Meet Criteria Under High-Burnup"

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**Tab 6: Meeting Agenda**

**PROJECTED AGENDA FOR NOVEMBER 15, 1999**

- 10:00 a.m. Introduction/Opening remarks in the Main Conference Room
- 10:10 a.m. Westinghouse overview
- 10:30 a.m. Tour of Chemical and Mechanical process areas
- 12:30 p.m. Working lunch, update on current issues
- 1:30 p.m. Tour of outdoor areas
- 2:30 p.m. Exit Meeting
- 3:00 p.m. Leave Westinghouse

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**Tab 7: Organization and Licensee Biographies**

This tab contains the following information. Please note that Westinghouse has designated the Org charts as proprietary information.

Org chart for Senior Vice President (J.A. Fici)

Org charts (2 pgs) for Plant Manager (J.B. Allen)

Org charts (9 pgs) for Plant Manager's direct reports

Biographical information on:

- James A. Fici, Senior Vice President
- Jack B. Allen, Jr., Plant Manager
- Donald C. Goldbach, Jr., Manager, Regulatory Affairs
- Samuel G. McDonald III, Manager, Technical Services
- James R. Bush, Manager, Manufacturing
- Edwin E. Keelen, Manager, Quality Assurance
- Gregory Davis, Controller and Manager, Materials and Planning
- Andrew F. Kaminsky, Manager, Human Resources

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**Tab 8: Most Recent Licensee Performance Review (LPR)**

**This tab contains the LPR transmittal letter to Westinghouse dated April 2, 1998, and LPR enclosure.**

**LIMITED OFFICIAL USE ONLY****Tab 9: Executive Summaries for Inspection Reports Issued Since Last LPR**

The Executive Summaries for the following inspection reports are included:

70-1151/99-05	Emergency Preparedness
70-1151/99-03	Radiation Protection and Emergency Preparedness
70-1151/99-02	Fire Safety
70-1151/99-01	Plant Operations, Management Organization and Controls, Environmental Protection, Waste Management, and Maintenance
70-1151/98-10	Plant Operations, Radiation Protection, and Transportation
70-1151/98-09	Plant Operations and Maintenance
70-1151/98-07	Emergency Preparedness
70-1151/98-06	Plant Operations, Management Controls, Waste Management, Transportation, and Training
70-1151/98-05	Radiation Protection
70-1151/98-04	Security and Safeguards
70-1151/98-03	Plant Operations
70-1151/98-201	MC&A (NOTE: Contains 10 CFR 2.790 Information)
70-1151/98-202	Criticality Safety
70-1151/98-203	Criticality Safety
70-1151/98-204	Criticality Safety
70-1151/98-205	MC&A (NOTE: Contains 10 CFR 2.790 Information)
71-0708/98-201	Transportation Quality Assurance
70-1151/99-201	Chemical Safety
70-1151/99-202	MC&A (NOTE: Contains 10 CFR 2.790 Information)
70-1151/99-203	Criticality Safety

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Tab 10: Reportable Events Since Last LPR

NMED Event descriptions for the following:

Item #980610 - Loss of mass control in roll compactor hopper on 8/5/99

Item #980038 - Fire in a polypack located in a ventilated hood on 1/12/99

Item #980898 - Accumulation of pellets under grinder bowl feeder on 8/19/98

Item #980805 - Inadequate drainage of condensate from UF6 cylinder steam chest on 7/16/98

Item #980737 - Uranium powder spilled from feed line onto mezzanine floor on 6/30/98

Other events reported by licensee:

Violation of Certificate of Compliance for shipment of fuel assemblies with 7 inches of annular pellets at each end (CoC authorized 6-inches) without proper authorization per 30-day report dated 8/17/99.

Violation of Certificate of Compliance for shipment of fuel assemblies with modified guide tube dimensions without proper authorization by the CoC per 30-day report dated 3/9/99.

Violation of Certificate of Compliance for failure to conduct detailed inspection of gadolinium absorber plates within the required 5-year frequency per 30-day report issued in September 1998.



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Tab 11: Effluent and Exposure Data

NOTE: The following information sheet is typically provided for Screening Meetings and Sr. Management Meetings. It has been updated with the most recently available data.

Westinghouse Highlights:

<p>Events (9101 and other issues) 5/1/98 - 1/31/99</p>	<p>8/99 - Material accumulation in roll compactor hopper due to failed level probe. 7/99 - Fuel assembly with modified blanket pellet design shipped contrary to CoC. 2/99 - Fuel assembly with modified guide tube design shipped contrary to CoC. 1/99 - Plastic container of U-contaminated ash caught fire (30-day report). 1/99 - Small fire in cutting room due to unauthorized combustibles 10/98 - Punctured drum of LLW delivered to Barnwell 8/98 - Large accumulation of pellets under pellet grinder bowl feeder (EN#34662) 8/98 - Neutron absorbers on fuel assembly shipping containers not inspected (30 day report) 8/98 - Three workers allowed to work with encapsulated SNM without the required radiation safety training 7/98 - UF6 vaporizer condensate drain clogged (EN#34533) 6/98 - Failed clamp causes 40 kg powder spill (EN#34460) 6/98 - Criticality safety calculations not independently verified</p>		
<p>Occupational Exposure</p>		<p><u>Collective Dose</u></p>	<p><u>Maximum TEDE</u></p>
<p>Radioactive Liquid and Gaseous Effluent Releases</p>		<p><u>Liquid (mCi)</u></p>	<p><u>Gaseous (µCi)</u></p>
<p>Maximum Offsite Dose due to Gaseous Releases</p>			
<p>Labor/Union Issues</p>	<p>None</p>		
<p>Major Management Changes</p>	<p>9/99 - D. Goldbach appointed Manager, Regulatory Affairs replacing W. Goodwin.</p>		