Gregory Jaczko, Commissioner
U.S. Nuclear Regulatory Commission

Steve Tritch, CEO and President
Westinghouse Electric Company

April 10, 2006

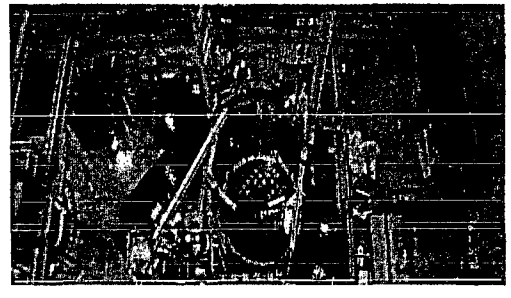
Proposed Agenda

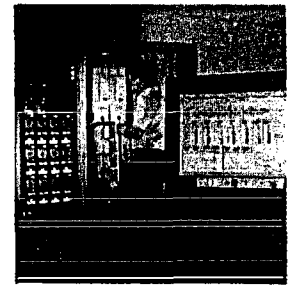
- Westinghouse mission and global organization
- Strategic objectives and Customer 1st
- Westinghouse safety record
- Westinghouse sale to Toshiba
- Resources & search for additional facilities
- AP1000
- International licensing of nuclear plants
- Westinghouse innovation process
- Commissioner issues
- Commissioner feedback

Westinghouse Electric Company

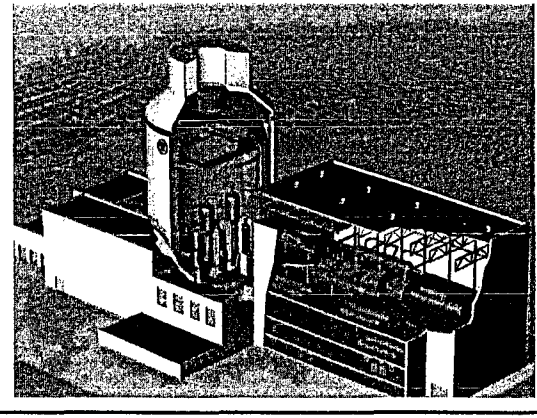
Westinghouse Electric Company Headquarters
Energy Center, Monroeville, Pa, USA

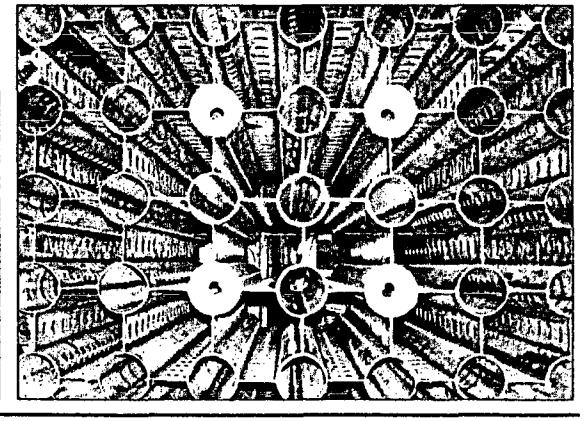
Westinghouse Electric Company provides fuel, services, technology, plant design, and equipment to utility and industrial customers in the worldwide commercial nuclear electric power industry.





Westinghouse nuclear technology will help provide future generations with safe, clean and reliable electricity.



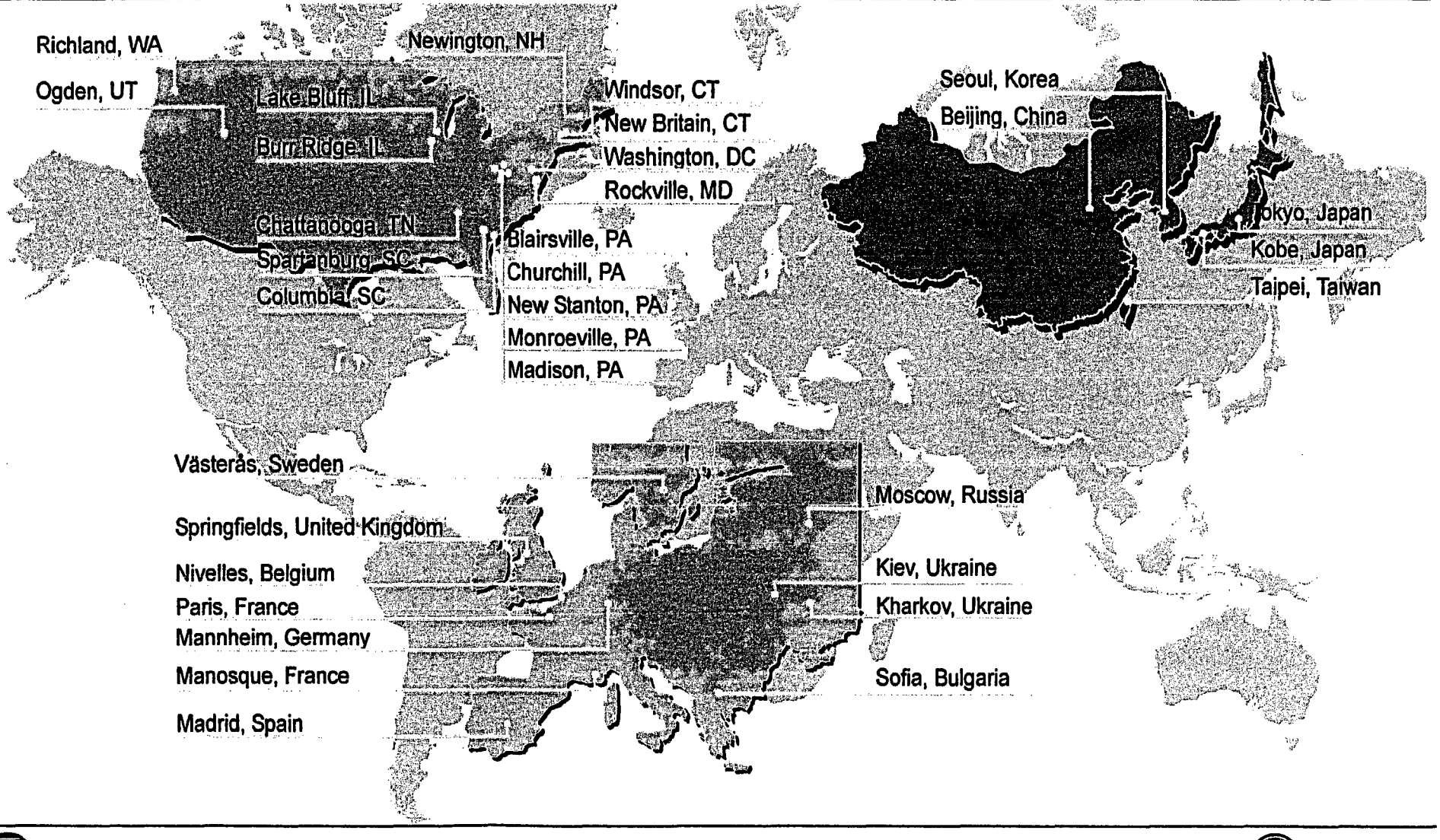


Westinghouse Electric Company Vision and Values

Our vision is to be the customers' choice to supply leading-edge nuclear technology to satisfy the world's growing demand for energy. Our values support this vision:

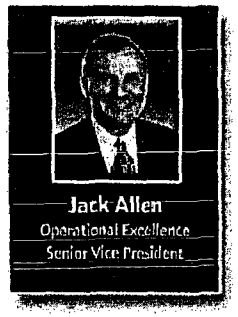
- Act with integrity and respect for others
- Be safe and environmentally responsible
- Commit to achieve success for our customers
- Deliver value and profit
- Excel in our operations

More than 8,500 Employees in 15 Countries – and growing!

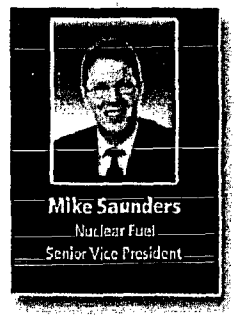


Westinghouse Electric Company Organization Chart

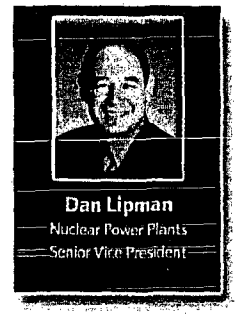
Steve Tritch
President and CEO



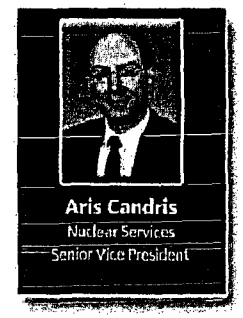
Jack Allen
Operational Excellence
Senior Vice President



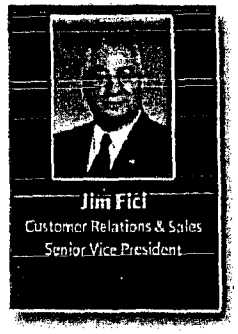
Mike Saunders
Nuclear Fuel
Senior Vice President



Dan Lipman
Nuclear Power Plants
Senior Vice President

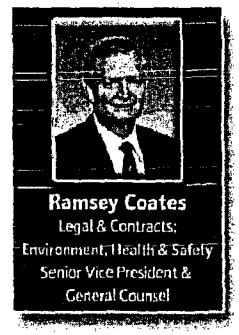


Aris Candris
Nuclear Services
Senior Vice President

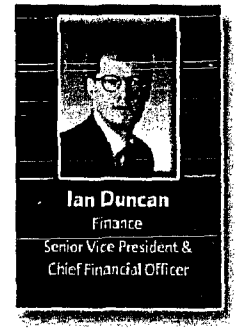


Jim Fici
Customer Relations & Sales
Senior Vice President

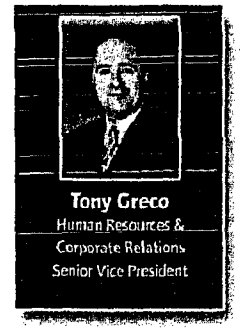
Regis Matzie
Research & Technology
Senior Vice President and
Chief Technology Officer



Ramsey Coates
Legal & Contracts;
Environment, Health & Safety
Senior Vice President &
General Counsel



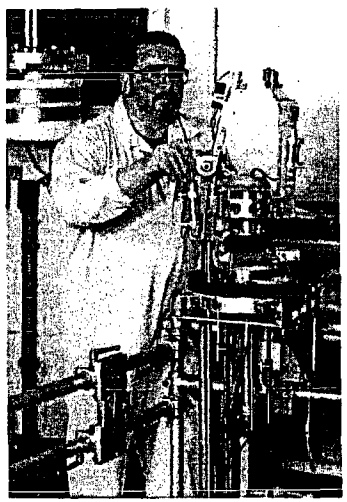
Ian Duncan
Finance
Senior Vice President &
Chief Financial Officer



Tony Greco
Human Resources &
Corporate Relations
Senior Vice President

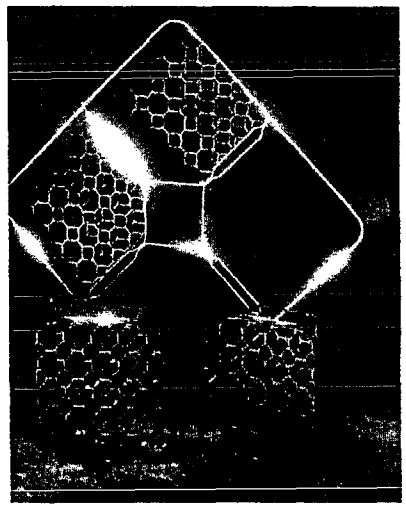
May 15, 2005

Three Core Businesses



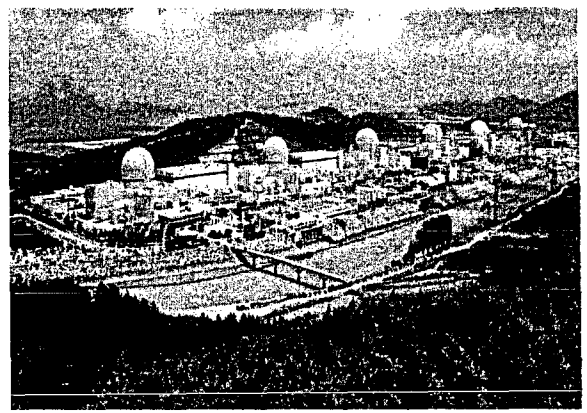
Nuclear Services

Maintenance and repair of equipment; services and methods in the design and safety of nuclear power plants



Nuclear Fuel

A single-source fuel provider for PWR, BWR, VVER, AGR, and Magnox reactors worldwide



Nuclear Power Plants

Specializing in the technology of new nuclear power plants and component manufacturing

Total Revenue $2 Billion

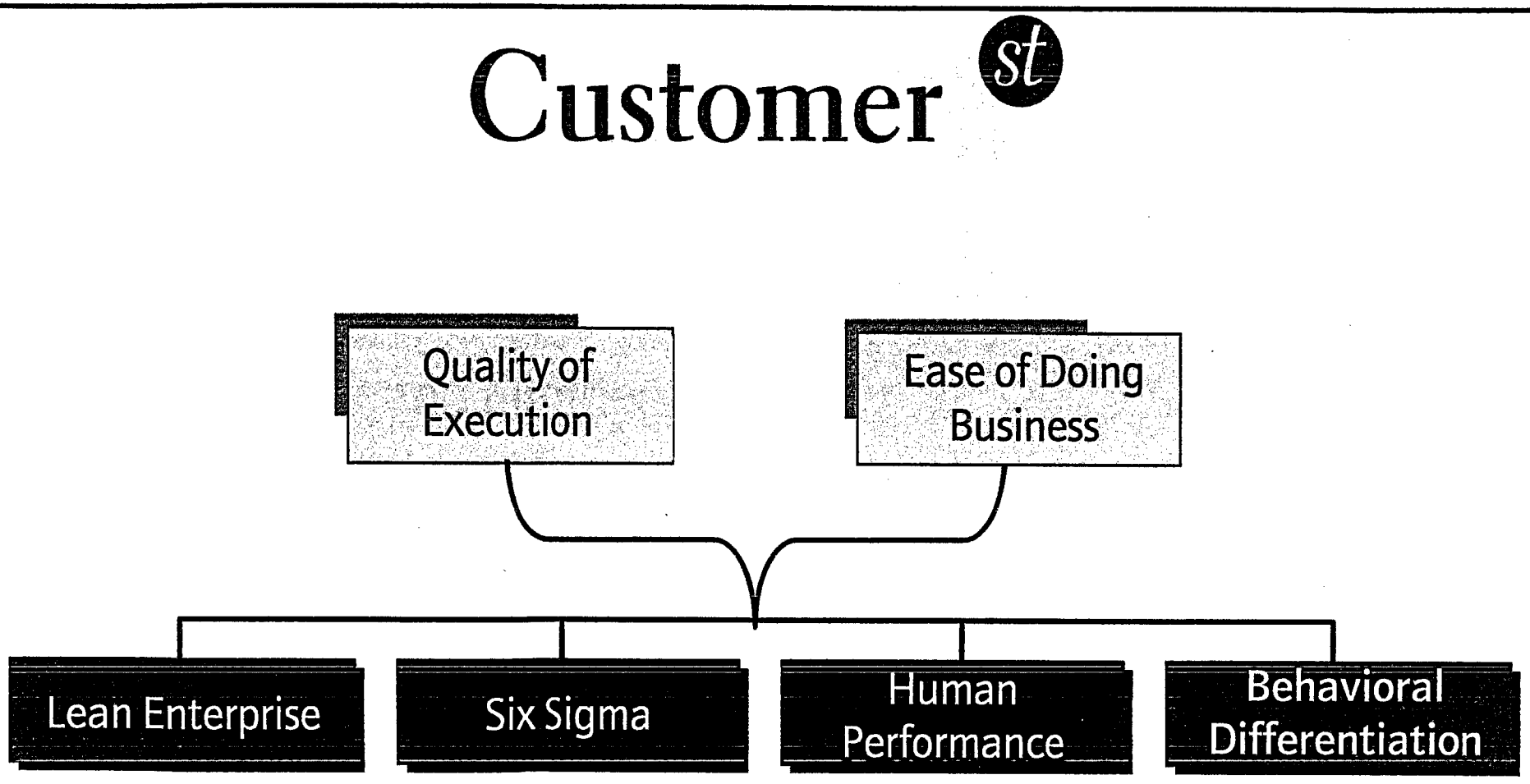
Strategy Implementation & Metrics
Westinghouse Strategic Objectives

- Behavior Differentiation
- Create Success for Customers

- World Class EHS
- Flawless Execution
- Cost Competitiveness

- Develop Leading Technology Solutions

Customer 1st Program Structure/Tools

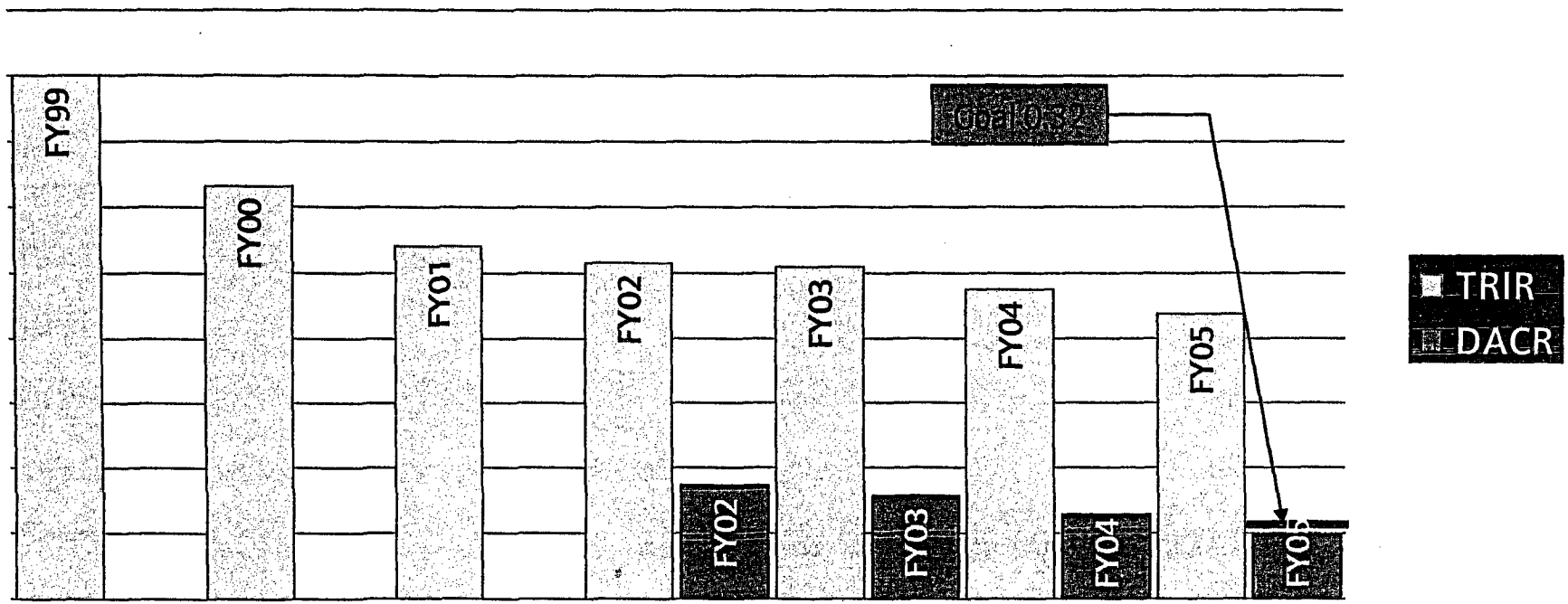


Customer 1st Improvement Examples

- Customer Support
  - –Palo Verde RCP motor oil leakage rate improvements
  - –Beaver Valley – outage in-processing cycle time improvements
  - – CEDM installation quality and cycle time improvement
- Manufacturing and Engineering
  - –Head upgrades – Enhancements of CEDM hardware assembly and test cycle time and quality
  - –Chemical cleaning lean techniques for waste reduction
  - –Use of Human Performance tools (peer reviews, pre-job briefs, etc.) for design analysis and engineering work

Westinghouse - A Safety-Oriented Culture

Total Recordable Incident Rate (TRIR) History and
Days Away Case Rate (DACR) Performance



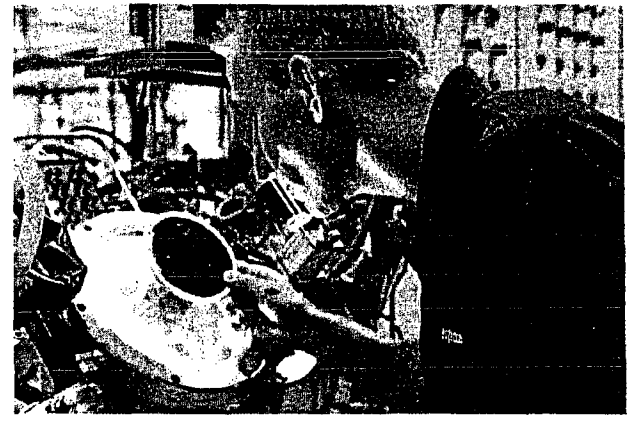
As of July 31, 2005

Westinghouse Sale to Toshiba

- February 6, 2006 – Purchase and sale agreement between Toshiba and BNFL for $5.4 billion
- Announcement received positively by customers and employees alike
- Westinghouse will continue to operate from Pittsburgh headquarters; retain current facilities, equipment, employees, patents and trademarks
- Toshiba in discussion with other companies, including U.S., about possible sale of up to 49% minority interest in Westinghouse. Toshiba will remain majority and controlling shareholder
- Regulatory and government filings are in process to obtain required approvals
- Closure on a final sale agreement expected fall 2006
- Sale will create a world-class global nuclear power business committed to safely providing superior generation systems, services and fuel for PWRs and BWRs

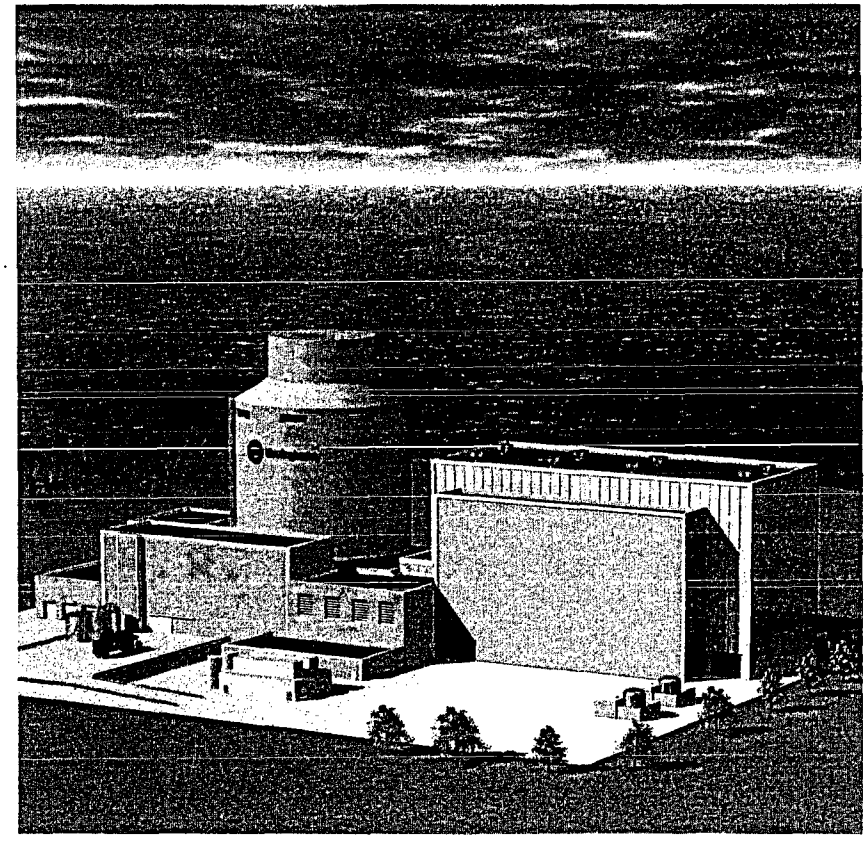
Human Resources and New Location Search

- Hiring and Retention
  - Hired 800 people in 2005
  - Potentially 500 more in 2006
  - Focus hiring process on critical skills
  - Retention rates very favorable
- Resource Alliances
  - Assists customers in access to critical skills
- New Location to be Added
  - Searching near existing facilities and in adjoining states



AP1000

- Customer Licensing Needs
- Standardization Benefits
- Standard Plant Expectations
- COL Action Items
- NuStart Schedules
- Technical Report Submittals
- Regulatory Certainty?
- China Bid



Westinghouse is Driven to Meet or Exceed Our Customer's Licensing Needs

- Westinghouse will have all design information to support COL open-item closure in support of customer applications as early as July 2007. This includes addressing DAC's on Instrumentation and Control, Human Factors and Piping
- The majority of plant design-related open items will be reviewed and "accepted" by the NRC staff prior to the COL submittal
- This drastically reduces the risks and possibly the schedule of the AP1000 COL licensing review

Standardization is Essential to the Nuclear Renaissance

- Standardization has been a key element of new plant commercialization for two decades – NPOC Strategic Plan
- The Utility Requirements Document standardized the power company requirements for new plants
- Westinghouse has sought to maximize standard scope
- Design Certification commits the plant supplier and the NRC to a "Standard Plant" as described in Design Control Document Tier 1
- COL applicants were free to deviate from the DCD Tier 2 requirements
- COL applicants are driven to "near identical" COL applications

The Nuclear Industry Acknowledges the Value of Standardization

- Scope of standardization includes the entire plant
- There will be only one design for all AP1000 sites
- The design includes all details – no field routing
- All plants serviced by the same Westinghouse Implementation Team
- Configuration control maintained by organization representing Westinghouse and all AP1000 owners
- All plants use the same suppliers for all engineered components
- Standardization can and will be extended beyond design and initial procurement

Standardization Beyond Design

- Operating Procedures
- Training
- Spare Parts
- Power company processes and procedures
- Engineering in support of operation and maintenance
- Licensing in support of operation and maintenance
- Maintenance/refueling activities
- Configuration management of the standard plant design
- Applicability of operating experience lessons learned and best practices

Standardization Provides Opportunities for Efficiency in NRC Processes

- Streamlined "Design-Centered" COL reviews
- Standard construction and operation inspection guidance
- Standard design-based response to emerging issues
- Operating plant LARs can be handled like consolidated line-item improvement processes (CLIIP)
- NRC staff training simplified
- Interchangeability of PM's and resident inspectors
- Topical reports will apply to all plants in the family

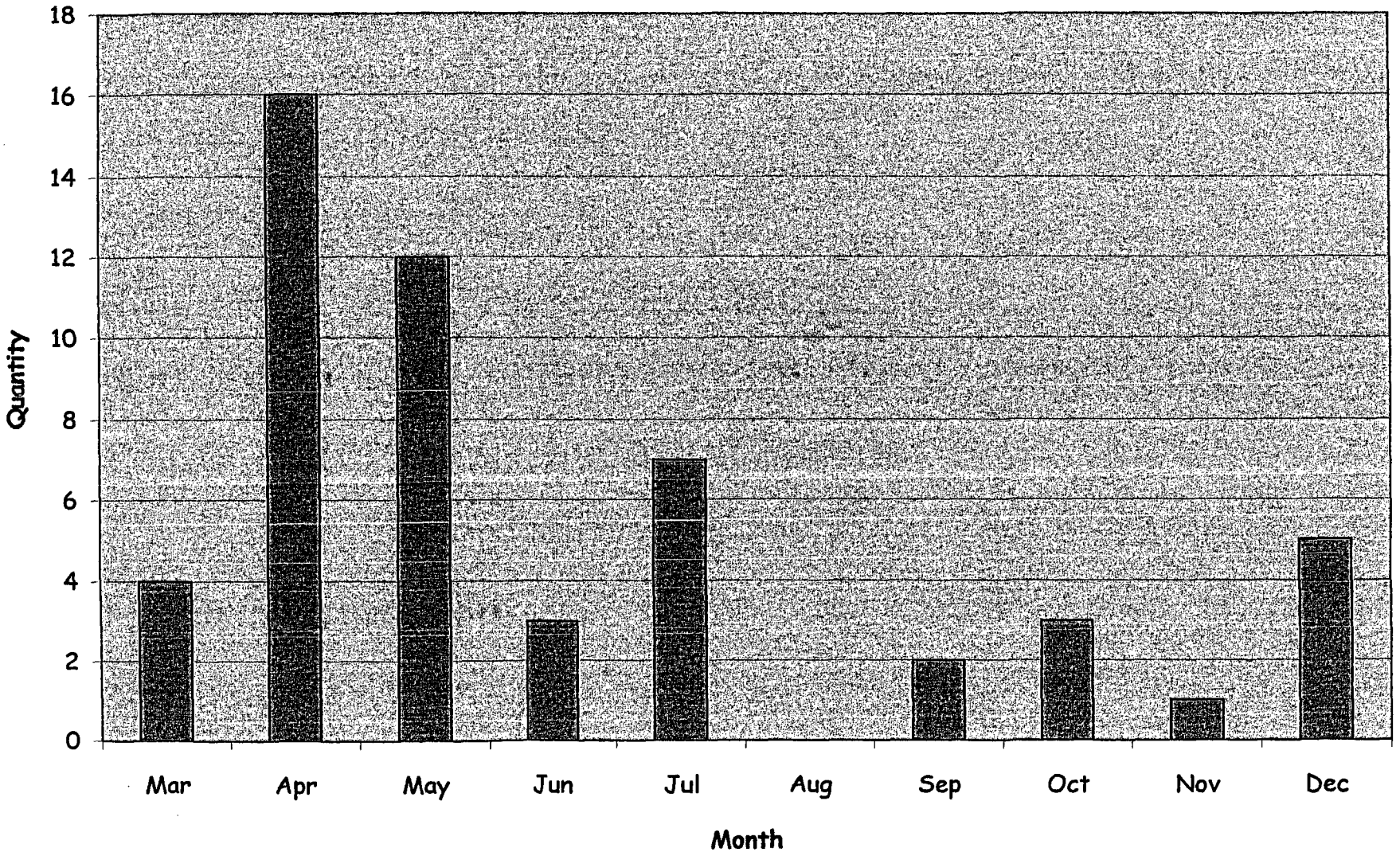
COL Items Demanding Significant Resources and Schedule

- Main control room design including:
  - Human factors assessments
  - I&C and display design
  - Simulator design
  - Developing operating procedures
- Performing ASME stress reports for all primary components
- Performing piping analysis for all leak before-break piping and all safety-related piping
- Expanding the seismic/structural analysis from hard rock sites to the Utility Requirements Document defined set of all likely soil sites
- Westinghouse has made significant progress in all of these areas

AP1000 Licensing Schedule Meets NuStart Targets for Bellefonte COL Submittal

- COL Engineering
  - The Westinghouse objective is to have COL support information by July 2007 to meet NuStart application schedules of fall 2007
  - Westinghouse initiated the NRC review of COL action items starting in March 2006
  - Westinghouse has developed a schedule of technical report submittals to deal with all design-related COL open items
  - Westinghouse will consider rule making to certify the additional information on the standard plant design

AP1000 Technical Report Submittal Schedule



Regulatory Certainty Important

- There is a need for an Integrated approach to changing regulatory requirements and processes
  - –Changes to 10CFR52
  - –Standard review plan revision process
  - –Development of Combined License Regulatory Guide
  - –Design-centered COL licensing approach
- Uncertainty exists regarding key technical review topics
  - –Seismic requirements
  - –Security assessments

International Licensing of Nuclear Plants

- MDAP should work to shorten AP1000 international licensing
  - China
  - Canada – Bruce Power
  - South Africa
  - Switzerland
  - United Kingdom
- The NRC policy of documenting safety evaluations (FSER) provides an excellent starting point for other regulators
- Focus on the reciprocity of MDAP is needed for U.S. designs
- The MDAP concept should apply to Fuel & Services (France)
- Broad international licensing regime is useful for IRIS and PBMR

Summary

- Prioritizing AP1000 COL applicants should result in the shortest path to new plants in the U.S.

- Revising 10CFR52 to permit rule changes to the AP1000 certified design promotes standardization and reduces implementation risks

China Bid

- Believe Sanmen & Yangjinag decision will be made soon
- Competition is very close and decision is highly political
- AP1000 technology preferred due to its simpler design, allowing Chinese to localize faster than EPR
- Key's to the decision are:
  - –Price
  - –Technology transfer and ability to achieve self-reliance
- Hope for a favorable decision during President Hu's visit to U.S.

Commissioner Issues

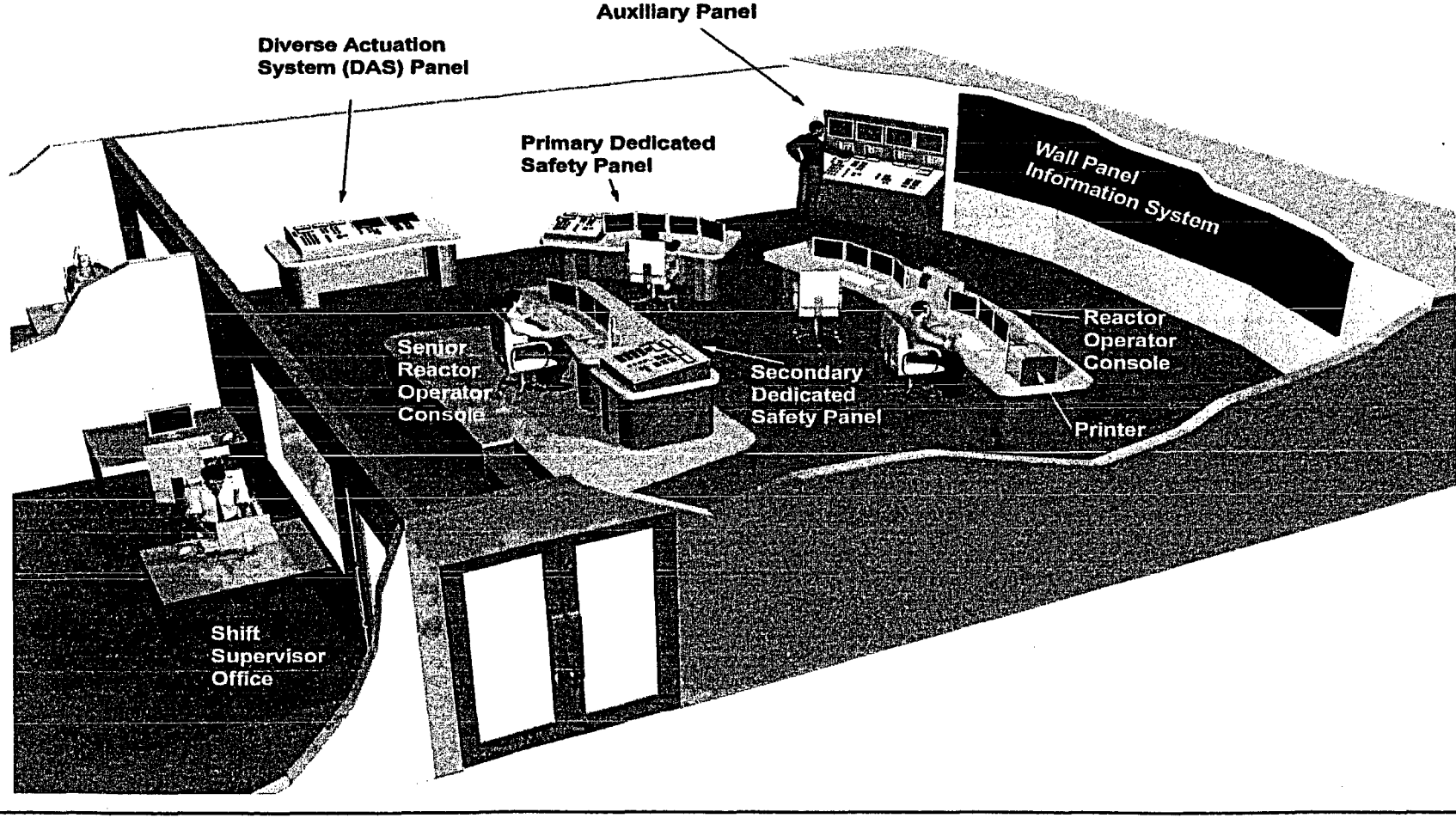
Commissioner Feedback & Action Items

- Feedback

- Action Items

BACK UP SLIDES

AP1000 Compact Control Room Will Address Human Factors COL Open Items



AP1000 Technical Report Schedule Backup

Tech. Report No.	COL Item No. or DCD Sec. No.	Subject	Available for NRC Review	Design Change?	Anticipated NRC Review Result
15	3.9-6	Piping Benchmark Program	Mar-06	N	Closure of Standard Plant COL Item
27	6.4-3	Main Control Room Inleakage Test Frequency	Mar-06	N	Closure of Standard Plant COL Item
48	11.2-3	Identification of Ion Exchange and Absorbent Media	Mar-06	N	Closure of Standard Plant COL Item
48	11.3-2	Identification of Absorbent Material	Mar-06	N	Closure of Standard Plant COL Item
73	11.2-4	Dilution and Control of Boric Acid Discharge	Mar-06	N	Closure of Standard Plant COL Item
32	5.2	Zinc Addition	Apr-06	Y	Acceptance of Standard Plant Design Change
37	6.2	Hydrogen Igniter Locations	Apr-06	Y	Acceptance of Standard Plant Design Change
38	6.3	PRHR Hx Design	Apr-06	Y	Acceptance of Standard Plant Design Change
72	18.2-1	HFE Program Status Report	Apr-06	N	Initiation of NRC/Project Interactions
52	18.5-2	Main Control Room Position Task	Apr-06	N	Closure of Standard Plant COL Item
59	18.7-1	Execution and Documentation of the Human Reliability Analysis/Human Factors Engineering Integration	Apr-06	N	Closure of Standard Plant COL Item
72	18.8-1	Execution and Documentation of the Human System Interface Design Implementation Plan	Apr-06	N	Initiation of NRC/Project Interactions
9	3.8-1	Containment Vessel Design Adjacent to Large Penetrations	Apr-06	N	Closure of Standard Plant COL Item
Letter		Letter Addressing Changes to Reference Reactor Design	Apr-06	Y	Initiation of NRC/Project Interactions
18	4.2-1	Changes to Reference Reactor Design	TBD	Y	TBD to be addressed via NRC/Project Interactions
18	4.3-1	Changes to Reference Reactor Design	TBD	Y	TBD to be addressed via NRC/Project Interactions
18	4.4-1	Changes to Reference Reactor Design	TBD	Y	TBD to be addressed via NRC/Project Interactions
18	4.4-2	Confirm Assumptions for Safety Analyses DNBR Limits	TBD	Y	TBD to be addressed via NRC/Project Interactions
62	3D	Methodology For Qualifying AP1000 Safety Related Electrical & Mechanical Equipment	Apr-06	Y	Clarification of Standard Plant Equipment Qualification
39	7.2	I&C Design Changes	Apr-06	Y	Acceptance of Standard Plant Design Change
3	3.7.2	Extension of NI Structures Seismic Analysis to Soil Sites	Apr-06	Y	Acceptance of Standard Plant Design Change
36	5.4	Pressurizer Configuration	Apr-06	Y	Acceptance of Standard Plant Design Change
42	7.1-2	Resolution of Generic Open Items and Plant-Specific Action Items	Apr-06	N	Closure of Standard Plant COL Item, Initiation of NRC/Westinghouse Interactions

AP1000 Technical Report Schedule Backup

Tech. Report No.	COL Item No. or DCD Sec. No.	Subject	Available for NRC Review	Design Change?	Anticipated NRC Review Result
43	7.2-1	FMEA for Protection System	Apr-06	N	Closure of Standard Plant COL Item
46	9.5-7	Fire Resistance Test Data	Apr-06	N	Closure of Standard Plant COL Item
Letter		Letter Addressing I&C Implementation	Apr-06		Initiation of NRC/Project Interactions
Letter		Letter Addressing Seismic Issues	Apr-06		Initiation of NRC/Project Interactions
5	3.3-1	Wind and Tornado Site Interface Criteria	May-06	N	
6	3.6-1	Pipe Break Hazards Analysis (As-built ITAAC Report)	May-06	N	Agreement to Defer As-Built Portion of COL Item
8	3.6-2	LBB Evaluation of As-designed Piping	May-06	N	
6	3.6-3	LBB Evaluation of As-built Piping (As-built ITAAC Report)	May-06	N	Agreement to Defer COL Item
6	3.7-3	Seismic Interaction Review (As-built ITAAC Report)	May-06	N	Agreement to Defer COL Item
6	3.7-4	Reconciliation of Seismic Analyses of Nuclear Island Structures (As-built ITAAC Report)	May-06	N	Agreement to Defer As-Built Portion of COL Item
6	3.8-2	Passive Containment Cooling System Water Storage Tank Examination (As-built ITAAC Report)	May-06	N	Agreement to Defer COL Item
6	3.8-3	As-Built Summary Report (As-built ITAAC Report)	May-06	N	Agreement to Defer COL Item
6	3.8-4	In-Service Inspection of Containment Vessel (As-built ITAAC topical)	May-06	N	Agreement to Defer COL Item
6	3.9-2	Design Specification and Reports (As-built portion of Cycling & Stratification)	May-06	N	Agreement to Defer As-Built Portion of COL Item
33	5.2	Reactor Coolant Boundary Materials	May-06	Y	
6	5.3-1	Reactor Vessel Pressure – Temperature Limit Curves (As-built ITAAC Report)	May-06	N	Agreement to Defer COL Item
23	5.3-3	Surveillance Capsule Lead Factor and Azimuthal Location Confirmation	May-06	N	

AP1000 Technical Report Schedule Backup

Tech. Report No.	COL Item No. or DCD Sec. No.	Subject	Available for NRC Review	Design Change?	Anticipated NRC Review Result
6	5.3-4	Reactor Vessel Materials Properties Verification (As-built ITAAC Report)	May-06	N	Agreement to Defer COL Item
35	5.4	Steam Generator Description Changes	May-06	Y	
28	7.1-1	Setpoint Calculations for Protective Functions	May-06	N	
44	9.1-1	New Fuel Rack Design & Structural Analysis	May-06	N	
67	9.1-2	Criticality Analysis for New Fuel Rack	May-06	N	
65	9.1-4	Criticality Analysis for Spent Fuel Racks	May-06	N	
45	9.5-5	Operator Actions Minimizing Spurious ADS Actuation	May-06	N	
6	10.2-1	Turbine Maintenance and Inspection (As-built ITAAC Report)	May-06	N	Agreement to Defer COL Item
40	16.1	ES Actuation System Instrumentation	May-06	Y	
6	19.59.10-1	As-Built SSC HCLPF Comparison to Seismic Margin Evaluation (As-built ITAAC Report)	May-06	N	Agreement to Defer COL Item
6	19.59.10-2	Evaluation of As-Built Plant Versus Design in AP1000 PRA and Site-Specific PRA External Events (As-built ITAAC Report)	May-06	N	Agreement to Defer COL Item
6	19.59.10-3	Internal Fire and Internal Flood Analysis (As-built ITAAC Report)	May-06	N	Agreement to Defer COL Item
56	2.5-12	Static and Dynamic Stability of Facilities (Soil Report)	Jun-06	N	
16	3.10-1	Experience-Based Qualification	Jun-06	N	
54	9.1-3	Spent Fuel Racks Design & Structural Analysis	Jun-06	N	
1	1.1-1	Construction and Startup schedule	Jul-06	N	
29	3.9	Reactor Internals Neutron Pads	Jul-06	Y	
30	3.9	Control Rod Drive System	Jul-06	Y	
61	3.9	Integrated Head Package Design	Jul-06	Y	
12	3.9-2	Design Specification and Reports (RVI SCC / Swelling)	Jul-06	N	Partial Closure of Standard Plant COL Item

AP1000 Technical Report Schedule Backup

Tech. Report No.	COL Item No. or DCD Sec. No.	Subject	Available for NRC Review	Design Change?	Anticipated NRC Review Result
31	4.5	Reactor Internals Materials	Jul-06	Y	
34	5.4	Generic Reactor Coolant Pump	Sep-06	Y	
26	6.3-2	Verification of Containment Resident Particulate Debris Characteristics	Sep-06	N	
24	5.3-5	Reactor Vessel Insulation	Oct-06	N	
49	13.6-1	Security Plans, Organization and Testing	Oct-06	N	
68	19.59.10-5	Equipment Survivability	Oct-06	N	
7	3.6-1	Pipe Break Hazards Analysis	Nov-06	N	
10	3.9-1	Reactor Internals Vibration Program	Dec-06	N	
13	3.9-2	Design Specification and Reports (Cycling & Stratification)	Dec-06	N	Partial Closure of Standard Plant COL Item
70	13.5-1	Plant Procedures	Dec-06	N	
71	14.4-2	Test Specifications and Procedures	Dec-06	N	
71	14.4-3	Conduct of Test Program	Dec-06	N	
66	19.59.10-4	Develop and Implement Severe Accident Management Guidance	Dec-06	N	

Westinghouse

A BNFL Group company