From: Marcia Karabelnikoff
To: Lyons, James
Date: Fri, Oct 5, 2001 1:40 PM
Subject: Tom King's Request

Files attached

Participants in October 10–12, 2001,
High-Temperature Gas-Cooled Reactors Safety and Research Issues Workshop

International	Name/Title	Remarks
– Germany	–Dr. Gerd Brinkmann Framatome ANP GmbH	–Experience on HTR-module design and license application
– Japan	Dr. Toshiyuki Tanaka	Scientific Consultant to JAERI, Former Director General of Oarai Research Establishment, JAERI
– Russia	Peter Fomichenko, Head Advanced Reactor Division Kurchatov Institute	Recommended by Dr. Ponimerev-Stepnoi, Deputy Director Kurchatov Institute
– South Africa	Guy Clapisson, Senior Manager, Power Reactors National Nuclear Regulator	Head of South Africa Pebble Bed Modular Reactor Regulatory Effort
– United Kingdom	–William Ascroft-Hutton Superintending Inspector of Nuclear Installation Health and Safety Executive –Mr. Lyn Summers NII/Health and Safety Executive	–Lawrence William's point of contact for advanced reactors –Large amount of operational experience on gas-cooled reactors
– China	Professor Xu Yuanhui Institute of Nuclear Energy Technology	–Lead person at INET for HTR-10
– IAEA	Marco Gasparini Division of Nuclear Installation Safety	Lead for IAEA High-Temperature Gas-Cooled Reactor Safety Programs
– European Union		Will be represented by Dr. Brinkmann (Germany)

Participants in October 10–12, 2001,
High-Temperature Gas-Cooled Reactors Safety and Research Issues Workshop

Domestic	Name/Title	Remarks
– Consultant	Dr. Thomas Murley	Former Director, NRR
– Consultant	Mr. H. L. Brey	Former Vice President Nuclear Generation (Public Service of Colorado, Fort St. Vrain Owner and Operator)
– Massachusetts Institute of Technology	Andrew C. Kadak, Professor	Lead on MIT project to develop a pebble-bed HTGR
– DOE	Dr. Madeline Feltus, Senior Advisor for Research	Office of Nuclear Energy, Science and Technology
– SNL	–Paul Pickard, Manager Advanced Nuclear Concepts –Steve Wright, Advanced Nuclear Concepts Department –Randy Gaunt, Reactor Modelling and Analysis Group	–Experience with coated particle fuel
– INEEL	–Dr. Finis Southworth	–Co-leader – gas-cooled reactor Generation IV Technical Working Group.
– ORNL	–Syd Ball, Program Manager –Tim Burchell, Group Leader –Jim Corum, Corporate Fellow	–Many years HTGR experience. –Graphite expert. –High temperature materials.
– LANL	–Brent Boyak –Dr. D.V. Rao –Mr. Jay W. Spore	Previous involvement in HTGR design for new production reactor
– BNL	–Dr. Robert Bari –Dr. William Horak	–Senior Physicist and Advisor –Chairman, Energy Science and Technology Dept.
– ACRS Member	Thomas Kress	
– ACRS Member	Dana Powers	

Participants in October 10–12, 2001,
High-Temperature Gas-Cooled Reactors Safety and Research Issues Workshop

U.S. NRC	Title
Ashok C. Thadani	Director, Office of Nuclear Regulatory Research, RES
Thomas L. King	Director, Division of Systems Analysis and Regulatory Effectiveness, RES
Charles E. Ader	Deputy Division Director, Division of Systems Analysis and Regulatory Effectiveness, RES
John H. Flack	Chief, Regulatory Effectiveness Assessment and Human Factors Branch, RES
Ralph O. Meyer	Senior Technical Advisor for Core Performance and Fuel Behavior, RES
Steven A. Arndt	Team Leader, Instrumentation & Control Team, RES
Alan M. Rubin	Section Chief, Probabilistic Risk Analysis Branch, RES
Stuart D. Rubin	Senior Technical Advisor for Advanced Reactors, RES
Joseph Muscara	Senior Metallurgical Engineer, RES
Raji R. Tripathi	Senior Reactor Systems Engineer, RES
Jose G. Ibarra	Senior Reactor Systems Engineer, RES
Donald E. Carlson	Senior Reactor Systems Engineer, RES
James E. Lyons	Director, New Reactor Licensing Project Office, Office of Nuclear Reactor Regulation, NRR
Amy E. Cubbage	Reactor Systems Branch, NRR
Diane T. Jackson	Plant Systems Branch, NRR
Marsha K. Gamberoni	Office of Associate Director for Inspection and Programs, NRR
Joseph G. Giitter	Chief, Enrichment Section, Fuel Cycle Safety and Safeguards, NMSS

Agenda
High-Temperature Gas-Cooled Reactor (HTGR) Safety and Research Issues Workshop
October 10–12, 2001
Two White Flint North – Room T-2 B3
U.S. Nuclear Regulatory Commission
Rockville, MD 20852

Meeting Objectives

- Discuss and reach agreement on the dominant accident scenarios for HTGRs.
- Discuss and reach agreement on the primary evaluation criterion of criteria to be used in ranking issue importance for each scenario.
- Consider each scenario description, identify the primary phenomena, processes and safety issues for the scenario, and rank each relative to the primary evaluation criterion.
- Discuss research needs (including ongoing research programs) for high-priority safety issues.

Wednesday, October 10, 2001

8:15 a.m.	Check-in at front desk
8:30	**Research Director's Welcome (A. Thadani)**
8:40	**NRC Chairman's opening Remarks (R. Meserve)**
9:00	**Overview of NRC Advanced Reactor Research (A. Thadani)**
9:15	**Scope, Goals and Expected Outcome for Workshop (T. King)**
9:35	**General Description of the Pebble Bed Modular Reactor (PBMR) and NRC's PBMR Pre-Application Activities (S. Rubin and D. Carlson)**
10:20	**GT-MHR General Description (D. Carlson)**
10:40	Break
11:00	**Status of PBMR Licensing Review in South Africa (G. Clapisson)**
11:45	**Safety and Research Issues Identified in MIT Pebble Bed Reactor Project (A. Kadak)**
12:15 p.m.	Lunch
1:15	**Overview of Workshop Structure and Approach (B. Boyack/R. Meyer/D. Carlson)**
1:45	**Identification of HTGR Event Scenarios – All**
3:15	Break
3:30	**Discussion of Steady State Operational Issues – All**
5:00	**Adjourn**

Thursday, October 11, 2001

8:15 a.m.	Check-in at front desk
8:30	**Discussion of Loss of Forced Cooling Scenarios – All** – *Scenario description* – *Phenomena and issue identification and priority* – *Research needs*
10:30	Break
10:45	Loss of Forced Cooling (Continued)
12:15 p.m.	Lunch
1:15	**Discussion of Air Ingress and Water Ingress Scenarios – All** – *Scenario description* – *Phenomena and issue identification and priority (begin with Previous List/modify)* – *Research needs*
3:15	Break
3:30	**Discussion of Seismic Scenarios – All** – *Scenario description* – *Phenomena and issue identification and priority (begin with Previous Lists/modify* – *Research needs*
5:30	**Adjourn**

Friday, October 12, 2001

8:15 a.m.	Check-in at front desk
8:30	**Reactivity Event Scenarios – All** – *Scenario description* – *Phenomena and issue identification and priority (begin with Previous Lists/modify* – *Research needs*
10:15	Break
10:30	**Summary of Workshop Outcomes – NRC/All**
12:15 p.m.	**Adjourn**