POLICY ISSUE
NOTATION VOTE

April 27, 2001 SECY-01-0077

FOR: The Commissioners

FROM: William D. Travers
Executive Director for Operations

SUBJECT: BROADCASTING OF COMMISSION MEETINGS OVER THE INTERNET

PURPOSE:

To provide feedback to the Commission on the recent pilot program which tested the feasibility of broadcasting Commission meetings over the Internet, and to obtain Commission direction on future broadcasts.

BACKGROUND:

In a Staff Requirements Memorandum (COMSECY-00-0015), the Commission approved a proposal to pilot test an Internet communication technology known as “media streaming” to ascertain the viability of using media streaming to broadcast Commission meetings over the Internet. In COMSECY-00-0022, the Commission approved evaluation criteria to assess the pilot program.

DISCUSSION:

In September 1999, the staff demonstrated the capability of media streaming for the Commission and subsequently received approval to proceed with a pilot project. The scope of the pilot included hiring a contractor to broadcast both live and archived video coverage of some public Commission meetings over the Internet. The pilot was conducted from August 2000 to March 2001. The goals of the pilot were to exercise the media streaming technology and, in so doing, (1) identify any limitations or technical problems associated with this technology; (2) gauge public interest in viewing live and/or archived Commission meetings via the Internet; and (3) assess the startup and ongoing costs for fully implementing this technology at the NRC. During the pilot, viewers of the media streaming broadcasts were encouraged to complete a brief questionnaire so the contractor could capture viewer statistics, and to provide further comments via e-mail.

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Fifteen public Commission Meetings were selected for world-wide broadcast during the pilot. Two meetings (Oconee License Renewal and the Organization of Agreement States) were used for testing the equipment before beginning the pilot. The staff was successful in resolving the technical issues encountered.

All media streamed meetings were conducted in the Commission Meeting Room at NRC Headquarters. Remotely controlled cameras, a closed-circuit TV system, audio, video, and lighting for the meeting room are operated by Office of Administration (ADM) employees in an adjacent Control Room. A connection from the Control Room to the contractor's off-site facility provided the necessary live video feed from NRC to the contractor's encoding equipment. The video signal was then transformed into the encoded format suitable for broadcasting the meetings world-wide.

In addition to broadcasting the meetings "live," the contractor recorded the live images for later viewing from the NRC's external website. The archived files were available for Internet viewing within a few hours after the conclusion of each meeting. The website also provided viewers with instructions on downloading the required "Real-Player" free media streaming software, the list of archived NRC meetings available for viewing, and other related information to assist viewers.

VIEWER STATISTICS

Attachment 1 lists the Commission meetings broadcast during the pilot with the number of "unique" viewers for each meeting during either the live broadcast or the archived video. The staff determined that the number of "unique" viewers (distinct viewer addresses) was the best measure of the overall size of the viewing audience because it only refers to the number of different people accessing the video of each meeting. When the same viewer watched the live broadcast and returned later to view the archived meeting, this was counted as two separate events. Therefore, the actual number of "unique" viewers would be typically lower overall than the recorded number of viewers per meeting. As with all Internet sites, the measurement of site activity is inexact and firewall protection schemes make it difficult to get an accurate account of how many people are viewing NRC meetings. The viewer statistics should be taken in context as an approximate measure.

A summary of viewer statistics is provided below.

	LIVE MEETING	ARCHIVED MEETING
Total "Unique" viewers during pilot	329	614
Average "Unique" viewers per meeting	22	41

During the pilot, 329 "unique" viewers accessed the live video stream of the 15 Commission meetings (averaging 22 viewers per meeting) and 614 accessed the archived version at a later time (averaging 41 viewers per meeting).

As illustrated in Attachment 1, the size of the audience viewing each meeting varied greatly depending on the meeting's subject matter. The meeting topic which drew the largest audience was "Risk-Informing Special Treatment Requirements" with 71 and 91 "unique" viewers for the live and archived meetings, respectively. There were 72 and 42 "unique" viewers respectively, for the live and archived broadcast of the test meeting with the Organization of Agreement States. The test was only advertised to the States for broadcast. We received positive feedback from the States (see Attachment 3).

SURVEY RESULTS

An OMB-approved survey form (see Attachment 2) was provided on-line as part of the Media Streaming website to allow viewers an opportunity to provide feedback on their interest in viewing meetings over the Internet. The survey asked for the viewer's affiliation, the level of interest, and any comments. We received e-mail comments from 23 individuals (see Attachment 3). The majority of these comments were positive and included suggestions for various enhancements such as improving the quality and size of the video image, the quality of the slides (we subsequently increased the font size and boldness of the slides used), leaving slides up for viewing longer, and making slides available for download in advance of the meeting. If the Commission decides to continue live broadcasts, we will make the slides available for download shortly before the start of each meeting.

Eighty-one (81) viewers completed the website survey. Viewers were asked to check all categories that applied to them. The viewers who responded to the survey represented all stakeholder groups. Viewer affiliations and their interest levels as they indicated in the survey are shown below. Many of the 81 respondents checked multiple categories for each question.

Viewer Affiliations (Source: Voluntary Online Survey):

	Total Responses	General Public	NRC Staff	Industry	Utility	Inter-national	Public Interest	Media	Fed'l, State, Local Gov't	Licensee	Other
Totals	**81**	30	9	13	9	9	9	8	1	7	9
Pcts		37%	11%	16%	11%	11%	11%	10%	1%	9%	11%

Solicitation of Interest (Source: Voluntary Online Survey)

		No Reply	Very Interested	Interested	Slightly Interested	No Interest
LIVE	Respondents	**4**	69	7	1	0
	Pct	**5%**	85%	9%	1%	0%
ARCHIVED	Respondents	**10**	57	5	6	3
	Pct	**12%**	70%	6%	7%	4%

Of those who completed the survey, 85 percent indicated they were "very interested" in having the ability to view live meetings and 70 percent indicated "very interested" in archived meetings. Although these survey results indicate that more respondents would prefer viewing the live meetings versus the archived version, actual viewing activity during the pilot was higher for the archived meetings (see Attachment 1). This higher activity for the archived meetings probably occurred in part due to the viewers ability to browse the archived meetings as their schedules permitted and in part due to repeated separate access to the archived versions.

PILOT COSTS

The costs incurred to broadcast the 15 meetings during the pilot are of three types: "one-time" startup costs, "monthly fixed fees," and "per-meeting" costs.

The one-time costs included all of the work by NRC staff and contractors necessary to plan, implement, and monitor the NRC's capability to broadcast the meetings via the Internet webpage. This included developing the contract specifications, installing special cabling within the NRC facility, connecting a dedicated video feed to the contractor's facility, configuring the contractor's telecommunications equipment to support the anticipated viewer response levels, creating the web page to provide the Internet link to view the meetings, preparing the computer system's security plan, and testing the system.

The monthly fixed fees included the contract cost to maintain the website and the telecommunications service fees for the high-speed video feed connection between NRC and the contractor's facility.

The per-meeting costs included the work by NRC staff and contractors involved in providing coverage of each live meeting being broadcast and creation of each meeting's encoded archive file.

The one-time costs, including NRC FTE, to establish NRC's capability to broadcast Commission meetings world-wide over the Internet for the pilot totaled approximately $73,400. The monthly fees for the 10-month contract performance period totaled $17,000. The per-meeting costs for the 15 meeting broadcasts totaled $30,050, an average of $2,003 per meeting. The total combined cost for the pilot project was $120,450.

TYPE OF COST	Pilot Project Costs				
	Unit Cost		Total Cost		
	CONTRACT EXPENSES	FTE $120K/year	CONTRACT EXPENSES	FTE $120K/year	TOTAL COSTS (EXPENSES & FTE)
One–time costs:			$13.4K	.5 = $60K	$73,400
Monthly Fixed-fees:	$1.7K	0	$17K	0	$17,000
Per-meeting costs:	$1,403	.005 = $600	$21.05K	.075 = $9K	$30,050
TOTALS			$51,450	$69,000	$120,450

Market surveys conducted by OCIO indicate NRC's pilot costs were consistent with current startup and ongoing system support expenses for this technology and activity level.

The startup and ongoing costs for the pilot did not include the cost for compliance with Section 508 of the Rehabilitation Act Amendments of 1998. Section 508 requires that when an agency develops, procures, maintains or uses electronic and information technology, the agency must provide access for the disabled that is comparable to access provided for those without disabilities.

On December 21, 2000, several months after NRC's initiation of the pilot, the Architectural and Transportation Barriers Compliance Board (Access Board) issued final regulations that provide standards for federal agency compliance with Section 508. In the context of web-based broadcasts, alternative access must be synchronized with the presentation. This means that for the deaf or hearing impaired, a text equivalent must be provided that captions the audio element of the broadcast.

Section 508 does not require that an agency provide access in a fashion that creates an "undue burden." The increased cost to provide live, real-time text captioning of Commission meetings versus the alternative of a next-day transcript is approximately $32,000 per year based on an estimated 40 meetings annually averaging 2 hours in duration. OGC believes that this cost differential alone is highly unlikely to be viewed as an undue burden for the NRC.

Accordingly, estimated costs for real-time text subtitling have been factored into the cost for broadcasting live meetings. With respect to the option of only broadcasting archived meetings, the transcript of the meeting (which is available on NRC's website) can be provided within a one-day response time and will be available in a format that complies with the requirements of Section 508. If the Commission decides to continue live broadcasts, we will make the slides available for download shortly before the start of each meeting, in a format that complies with the requirements of Section 508.

OPTIONS AND THEIR ASSOCIATED ESTIMATED COSTS

Based on the experience gained during the pilot and the market research previously mentioned, the following options are offered for consideration in deciding the future of media streaming at the NRC. The estimated cost of each option is provided.

Each option is based on 40 two-hour meetings, the approximate number of public Commission meetings held annually, broadcast from either the Commission Meeting Room or the Two White Flint Auditorium. As discussed previously, the cost to comply with Section 508 of the Rehabilitation Act is listed for the option that includes the broadcasting of live meetings.

OPTION 1 - Live and Archived Broadcasts by a Contractor

This option would continue the configuration used during the pilot wherein NRC staff controlled the video taping of the live meeting and transmitted the video in real-time to the contractor's facility. The contractor's computers and other specialized equipment would then process, store, and transmit the meeting broadcasts to the viewers in real time.

	Live + Archived Broadcasts by a Contractor			
TYPE OF COST	**1st Year Cost**		**Additional Years Annual Cost**	
	CONTRACT EXPENSES	**FTE** 1 FTE =$120K/year	CONTRACT EXPENSES	**FTE** 1 FTE =$120K/year
One–time costs:	**$13.4K**	**.5 = $60K**		
Monthly Fixed-fees	**$1,700 x 12 mos. = $20.4K**	**0**	**$20.4K**	**0**
Per-meeting costs:	**$1,403 x 40 mtgs. = $56K**	**.2 = $24K**	**$56K**	**.2 = $24K**
Live Closed Captioning:	**$32K**	**0**	**$32K**	**0**
TOTALS	**$121,800**	**$84,000**	**$108,400**	**$24,000**

OPTION 2 - Archived Only Broadcasts by a Contractor

This option would have NRC staff control the video taping of the live meeting but instead of transmitting the video in real-time to the contractor's facility, NRC would supply the contractor with a tape of the meeting after its conclusion. The contractor would maintain the computers and other equipment used to process the tape into the encoded archive format, store, and transmit the meeting broadcasts to the viewers. The contractor would complete the archive process and have the meeting available for viewing via the webpage by the next business day following the meeting. This option would be approximately half the cost of Option 1 the first year and approximately one third the cost in the out years.

	Archived Only Broadcasts by a Contractor	
TYPE OF COST	**1st Year Cost**	**Additional Years Annual Cost**

	CONTRACT EXPENSES	**FTE** 1 FTE =$120K/year	CONTRACT EXPENSES	**FTE** 1 FTE =$120K/year
One–time costs:	**$6K**	**.5 = $60K**		
Monthly Fixed-fees	**$600 x 12 mos. = $7.2K**	**0**		
Per-meeting costs:	**$500 x 40 mtgs. = $20K**	**.2 = $24K**	**$20K**	**.2 = $24K**
Live Closed Captioning:	**N/A**	**N/A**	**N/A**	**N/A**
TOTALS	**$33,200**	**$84,000**	**$20,000**	**$24,000**

OPTION 3 - Status Quo/No further Media Streaming Broadcasts of NRC Meetings by a Contractor

Under this option, the Commission would not employ media streaming for Commission meetings at this time. The staff would continue to monitor this emerging industry and if technological advances result in significant reductions in costs and improvements in video quality, or both, those developments could be brought before the Commission for reconsideration at a later time.

OTHER CONSIDERATIONS

The staff considered live and archived broadcasts hosted by NRC rather than a contractor. However, an analysis revealed that while it would be less costly in contract dollars, the high cost of FTE would more than offset the lower contract costs. Supporting the equipment and providing the services with NRC staff as well as obtaining the necessary backup equipment, reserve capacity, and probable upgrades to NRC Internet access and infrastructure eliminated this as a cost effective option.

The staff considered costs for providing “audio-only” (or “radio-like”) coverage of Commission Meetings. There are few cost savings to be realized by withholding images. Somewhat less data would be transmitted and significantly smaller archive files would be stored, but these are not the major contributors to cost. “Audio only” would reduce the costs by about 5 percent.

<u>SUMMARY</u>

The NRC evaluated both live and recorded broadcasts of some Commission meetings over the Internet. These broadcasts effectively doubled the viewing audience of Commission meetings, potentially increasing public understanding of the Commission’s activities and reducing the burden on stakeholders of having to travel to the meetings. Viewers, representing all stakeholder groups, were interested in the capability to observe actual meeting discussions and provided positive feedback.

Based on the pilot, it would cost NRC approximately $122,000 and .7 FTE during the first year to implement a follow-on contract to support live and archived broadcast of approximately 40 meetings (Option 1). The estimated annual cost for additional years would decrease to

approximately $108,000 and .2 FTE. The estimated annual cost of hiring a contractor to broadcast only archived meetings during the first year is approximately $33,000 and .7 FTE (Option 2). The cost for additional years would be approximately $20,000 and .2 FTE. These projected costs include the cost for closed-captioning of live meetings to achieve compliance with Section 508 of the Rehabilitation Act.

There are no funds budgeted in FY 2001 to support the continuation of media streaming. However, funds in the amount of $250,000 are included in the ADM FY 2002-2004 budget for media streaming.

RECOMMENDATION:

On balance we recommend Option 2, hiring a contractor to broadcast only archived meetings. While the viewers would not see the meeting live, they could see a re-broadcast of the meeting via the website by the next day or at their convenience.

The staff would continue to monitor media streaming technology and if technological advances result in significant reductions in cost or improvements in video quality, these developments could be brought before the Commission for reconsideration at a later time.

/RA/

William D. Travers
Executive Director
for Operations

Attachments:
1. Viewer Statistics per Meeting
2. Survey Form
3. E-Mail Comments

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Attachment 1

Meeting-by-Meeting Viewers[1]

Date	Meeting	Live		Archived	
		Successful Requests[2]	Unique Visitors[3]	Successful Requests	Unique Visitors
08/15/00	Briefing on NRC International Programs[4]	0	0	127	96
09/29/00	Briefing on Risk-Informing Special Treatment Requirements	100	71	121	91
10/06/00	Meeting with ACRS	43	34	75	60
11/17/00	Briefing on Risk-Informed Regulation Implementation Plan	23	20	45	33
11/27/00	Briefing by DOE on Plutonium Disposition and MOX Fuel Fabrication Facility Licensing	65	28	36	25
12/04/00	Briefing on License Renewal Generic Aging Lessons Learned (GALL) Report, Standard Review Plan (SRP) and Regulatory Guide	25	18	56	35
12/20/00	Briefing on the Status of the Fuel Cycle Facility Oversight Program Revision	31	15	54	35
01/10/01	Briefing on the Status of Nuclear Materials Safety	51	28	40	29
01/17/01	Briefing on the Status of Nuclear Reactor Safety	24	20	78	43
01/30/01	Briefing on the Status of Nuclear Waste Safety	5	5	34	30
01/31/01	Briefing on the Status of OCIO Programs, Performance, and Plans	10	8	59	42
02/01/01	Briefing on the Status of OCFO Programs, Performance, and Plans	4	4	30	21
02/20/01	Briefing on Spent Fuel Pool Accident Risk at Decommissioning Plants and Rule-making Initiatives	62	51	44	24
02/26/01	Meetings with the National Association of Regulatory Utility Commissioners	23	16	69	43
03/22/01	Meeting with the Advisory Committee on Nuclear Waste	17	11	12	7[5]
	TOTALS	483	329	880	614
	AVERAGES	32.20	21.93	58.67	40.93

[1]The 6/13/00 meeting with Organization of Agreement States (OAS) and Conference of Radiation Control Program Directors (CRCPD) was a test and advertised only to the States for live broadcast. Statistics for this meeting indicated 201 successful requests, 72 unique visitors during the live streaming; 47 successful requests and 42 unique visitors viewing the archived meeting. Data are not available for the first test, the Oconee License Renewal meeting.

[2]Successful Requests = Streams transmitted (number of HITS).

[3]Unique Visitors = Distinct Viewer Addresses (Successful Requests are typically higher because a given viewer may discontinue viewing and restart later.)

[4]Live broadcast failed due to Verizon telephone line problem.

[5]Only had the benefit of being available for review 4 days.

Attachment 2

OMB Clearance No. 3150-0197
This information will be used in deciding whether to continue media streaming after the pilot program.

Pilot Test of Broadcasting of Commission Meetings Over the Internet
Customer Satisfaction Survey

The U. S. Nuclear Regulatory Commission is currently pilot testing (now thru March 26, 2001) the broadcasting of Commission meetings over the Internet as a means of improving communications with the public. You may view live Commission meetings as they take place or you may view, at a later time, meetings that have been archived for your convenience. The NRC would appreciate your assistance in answering the following questions. This information will assist NRC in determining the value of providing this service in the future. Thank you for your cooperation.

Viewer's affiliation (Please check your affiliation each time you view a Commission meeting.)
CHECK ALL THAT APPLY:

- ☐ General Public
- ☐ NRC Staff
- ☐ Industry
- ☐ Utility
- ☐ International
- ☐ Public Interest Group
- ☐ Media
- ☐ Federal, State or Local Official
- ☐ Licensee
- ☐ Other

How interested are you or your organization in having access to NRC meetings over the Internet?

Live Meetings	Archived Meetings
☐ Very Interested	☐ Very Interested
☐ Interested	☐ Interested
☐ Slightly Interested	☐ Slightly Interested
☐ No Interest	☐ No Interest

SUBMIT

MEDIA STREAMING E-MAIL FEEDBACK

Attachment 3

~ Comments ~

NAME	AFFILIATION	COMMENT SUMMARY
External		
Mike Smith	mlsnjax@Earthlink.net	Viewed from a 28.8 connection: *Video window size too small to be effective; slide text too small to read, visual shots made participants unrecognizable. Zooming to double size didn't help.*
John W. Nagy	Health Physics Manager	*This functionality will allow access to NRC meetings at less cost to more people. I think it's great. Hopeful that the webcasting will be expanded to include many of the public meetings, beyond those of the Commission.*
Donald Moniak	BREDL Aiken, SC	*Grateful for the webcast of the NRC/DOE/MOX meeting. It was very helpful for those who do not have the luxury of traveling to DC. Viewgraphs should be left on the screen longer so viewers can make notes rather than switching back to the speaker.*
Roger W. Huston	Licensing Support Services	*Impressed with the video streaming of the ACRS meeting. Suggests that more time be spent on displaying the slides rather than focusing on the meeting participants or [even better] make the slides available electronically beforehand. NRC's 25-year logo is too large. Survey form response indicated no interest in archived meetings, the reason being that the transcript is also available and preferable for historical reference. Video image is small. Will technology support a larger video image?*
N.W. Hough	Unknown	*Must have missed the live Internet webcast of the Commission Meeting on 8/15/00 @ 9:30. Where can I find a listing of future webcasts?*
David B. Alford, Engineer	Wolf Creek Nuclear Operating Corp.	Re: 9/29/00 Commission Briefing - *Due to the low quality of streaming video, much of the text on the slides was illegible and in many cases, chopped on either side. If possible, it would be helpful to have slide presentation as a separate download or better quality images prior to broadcast. Audio quality was exceptional and the usage of multiple camera points facilitated comprehension of the meeting and made it more interesting to watch. Live broadcasting is a great idea and I look forward to taking advantage of its availability in the future!*
Russell Powell	Former NRC employee	*Viewed your new innovation and commend you...it works very well...is simple to use...and gives the public first-hand access to government business activities.*
Julie J. Simpson, Tammra Horning	Oakridge National Laboratory	Re: International Activities Meeting of 8/15/00 - *We attempted to access the archived version of this meeting but got the 6/13 Agreement States meeting. The links to each video appeared to be distinct files, but the content appeared to be the same. We think it is a good idea and look forward to viewing some of the meetings.*

MEDIA STREAMING E-MAIL FEEDBACK

~ Comments ~

NAME	AFFILIATION	COMMENT SUMMARY
External		
Paul Gunter, Director	Reactor Watchdog Project	Excerpt from a letter dated 11/22/00, to Ellis Merschoff, Region IV: *We are requesting that NRC meetings already open to the public be made available to remote public observation by technologies including the telephone, video conferencing and "streaming" or web casting.*
Jim Hardeman	GA State Official	*Oconee relicensing briefing worked wonderfully. I applaud NRC for proactively making use of technology to improve public access to its meetings and deliberations. This activity sets a new standard for openness and access...*
Jim Joosten	Consultant	*Concept is absolutely great! Please pursue it. Great venue for regulators, utilities and concerned citizens around the world to keep abreast of the U.S. involvement in nuclear safety. Videostreaming does not seem to be compatible with all platforms. Microsoft Internet Explorer version 5 would not play the video lead and in Real Player 7: Image quality was poor, slides were hard to read, the font was small, all fonts were blurred severely due to excessive image compression, faces of participants were distorted, signal transmission speed too slow. It seems that your video-to-MPG file conversion software is the wrong choice. Suggest Silicon Graphics computer for signal conversion, Macromedia's FLASH software for producing and displaying the briefing slides.*
Richard Ratliff	Bureau of Radiation Control Texas Department of Health	*Disconnected from the listen only phone connection about 10 minutes into the briefing since it was not working. I was able to hear the whole briefing via the video streaming. It worked very well. The only glitch i noticed was that about an hour into it, the video portion was out of sync with the audio by about 10 minutes. Could have been a line problem.*
Robert Rowen	OH State Official	*Ohio State had no problems whatsoever. We terminated telephone hookup only because we were successfully participating in the videostreaming for the briefing. All went very well. Those in attendance were very impressed with this capability. Keep up the good work!*
Bob Hallisey	CRCPD MA Radiation Control Program	*Excellent job of covering this briefing session. The sound quality was excellent but picture quality and clarity need improvement. Greatly benefitted from seeing this live and observing the interactions. Look forward to future videocasts*.
Theresa Sutter	NUS Information Services	Re: Oconee License Renewal Meeting - *Video is pretty blurry. Slides are very blurry when shown on the screen but sound quality is great.*
Elaine Hiruo	McGraw Hill	*I found the web cast very helpful. Is there any way, though, that a stop button could be added? Thank you.*

MEDIA STREAMING E-MAIL FEEDBACK

~ Comments ~

NAME	AFFILIATION	COMMENT SUMMARY
External		
Patricia Campbell	Winston & Strawn	*The system worked very well. It was easy to set up and the picture and sound were very clear and crisp.*
Tina Davis	King Publishing - The Energy Daily	*In today's Commission briefing (Risk-Informed Regulation - 9:30 a.m.), the streaming video was about 15 minutes delayed from the audio, meaning that slides referred to in presentations appeared online well after they were mentioned. It would be better to sync the video and audio as closely as possible.*
Bob Raser	Unknown	*We all know video (not audio) has a way to go on the web, especially on my simple, slow, phone line modem. But the opportunity to see decision makers in action is wonderful.*

MEDIA STREAMING E-MAIL FEEDBACK

~ Comments ~

NAME	AFFILIATION	COMMENT SUMMARY
Internal		
Bradley Jones	NRC	*I tested the OAS meeting live webcast at both home and the office. Home: Using 266mhz Pentium II with 64 RAM running Windows 95. Connection with 56K modem was at 28800. Phone line limitations typically seem to limit our connection ability to between 28800 and 34000. I think this is a representative machine for the general public. Free software I downloaded was Realplayerbasic8 beta version. Initial connection: We need to make directions clear that address being given is for entry into a web browser. When I entered on Real Player as an address, I received an error messages. I realized it was meant to be a web browser, not a real player address. Results: Sound quality was fairly good but slightly warbled at times. Video was not good. The picture was viewable but there was no actual movement. Slides were difficult to read, some unreadable. Every 4-5 seconds the picture would change to a series of still shots. The bits per second was at 12.0kbs throughout. I lost the transmission to net congestion twice in the half hour that I watched. Each time the congestion lasted about 30 seconds to a minute.* *Office: Connection went smoothly and initially was at 80 kbs. Sound was excellent. Video had some significant problems. Initially screen was "scrambled." After looking at settings, I took off the "Use optimized Video display" located under "Preferences" at the "Performance" tab. I then turned off realvideo, reconnected and I was able to get high quality video. This worked for about 10 minutes and then the kbs dropped to 20 kbs. At this point, movements became very jerky and effect of seeing a live broadcast was lost. This did not appear to affect audio quality. Eventually kbs speed increased and quality improved. FYI - I reversed my process by activating the "Use optimized Video Display" to see if it had really caused the bad video. When I restarted, I again had a scrambled picture. I turned off that setting again and restarted. As with the first time, this cleared up the scrambled video image.*
Lynn Stauss	NRC	Re: OAS Meeting - *I could not access through the "NRC Broadcast" icon as I was told I could. I did get in by going to the external server and typing in www.nrc.gov/video.html as the netsite. Video resolution is the best on the "original" size with the poorest on the full screen. It may be best to disable the screen saver. Otherwise you must continually go in and bring the realplayer screen back up. Part way into the telecast, the video and audio was not synchronized. The voice was heard first, followed later by the video. I also put the TV on to see if it was real time. Not a big difference, about a 40 second delay via the MEDIA STREAMING.*

MEDIA STREAMING E-MAIL FEEDBACK

~ Comments ~

NAME	AFFILIATION	COMMENT SUMMARY
Internal		
John Randall	NRC	*Consider the pilot program of testing the broadcasting of Commission meetings over the Internet as a means of improving communications with the public a success.* *The Internet broadcasts give strong support to the Commission's public outreach efforts, an important part of the NRC Strategic Plan. These broadcasts should become a permanent feature of all Commission meetings open to the public. ....Being able to play back parts of the meeting that are of particular interest to me also is a big plus.*
William L. Dam	NRC	*I was not successful in downloading the real player of the web site so could not watch the Commission meeting via the web.*