

**U.S. Environmental Protection Agency
Science Advisory Board
Radiation Advisory Committee (RAC)**

Summary Minutes of Public Conference Call Meeting¹
February 28, 2005

Committee: Radiation Advisory Committee (RAC) of the U.S. Environmental Protection Agency's (EPA's) Science Advisory Board (SAB). (See Roster - Attachment A.)

Date and Time: Monday, February 28, 2005 from 10:00 a.m. to 1:55 p.m. eastern standard time (See Federal Register Notice - Attachment B).

Location: This is a conference call with no location announced. All participants were connected via the conference lines.

Purpose: To be briefed on the proposed National Monitoring System (NMS) Upgrade to the Environmental Radiation Ambient Monitoring System (ERAMS) (See Meeting Agenda - Attachment C.)

SAB/RAC Attendees: Committee Members Drs. Jill Lipoti, RAC Chair, Jan Johnson, MFG, Inc., Immediate Past RAC Chair; Lynn Anspaugh, University of Utah; Bruce Boecker, Lovelace Respiratory Research Institute; Antone Brooks, Washington State University; Gilles Bussod, New England Research, Inc.; Brian Dodd, Consultant, Las Vegas, Nev.; Shirley Fry, Consultant, Indianapolis, IN; William Griffith, University of Washington; Helen Grogan, Cascade Scientific; Richard (Rick) Hornung, University of Cincinnati; and Richard Vetter, Mayo Clinic - all current members were present. (See Attachment A); Dr. K. Jack Kooyoomjian (Designated Federal Official) and Dr. Vanessa Vu - SAB Staff Office Director - SAB Staff participated.

Agency Staff Attendees: ORIA, Washington, DC: Dr. Mary E. Clark, Sara DeCair, Jacolyn (Jackie) Dziuban, Barnes Johnson, Adam Klinger; ORIA, Montgomery, AL: Michael Clark, Ronald (Ron) Fraass, Dr. John Griggs, Robert Lowry, Dr. Keith McCroan, Charles (Chuck) Petko, Scott Teloski, and Mary Wisdom.

Public Attendees: Mr. Lynn H. Ehrle, Senior Research Fellow, Cancer Prevention Coalition; Dr. Judith H. Johnsrud, Chair, National Nuclear Waste Committee, Sierra Club and Director of the Environmental Coalition in Nuclear Power.

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NOTE: Please note that these minutes represent comments that are individual statements and opinions and are not necessarily consensus comments at this stage of the process in the review of any given topic. In all cases, the final SAB report to the EPA Administrator represents the consensus on the topic.

Meeting Summary: The meeting followed the issues and general timing as presented in the meeting Agenda, except where otherwise noted (see Meeting Agenda - Attachment C). There were written comments submitted to the Committee via e-mail following the meeting (see Attachments G-1 toG-2), as well as public comments offered orally during the course of the conference call meeting. Mr. Donovan Porterfield of Los Alamos, NM was unable to attend the conference call, but forwarded comments to the Committee (see Attachment G-1).

Welcome and Introductions: Dr. K. Jack Kooyoomjian, Designated Federal Officer (DFO), opened the meeting at approximately 10:05 am with identification of the participants logging into the call and with opening remarks. He introduced himself as the DFO for the Radiation Advisory Committee (RAC), explained the purpose of the call, indicating that this Committee operates under the requirements of the Federal Advisory Committee Act (FACA) and is chartered to conduct business under the SAB Charter. He explained that, consistent with FACA and with EPA policy, the deliberations of the RAC are conducted in public meetings, for which advance notice is given. He explained that he is present to ensure that the requirements of FACA are met, including the requirements for open meetings, for maintaining records of deliberations of the RAC, and making available the public summaries of meetings, as well as providing opportunities for public comment.

Dr. Kooyoomjian also commented on the status of this committee's compliance with Federal ethics and conflict-of-interest laws. The RAC follows the Committee and Panel Formation Process, as well as determinations made by the SAB staff and others pertaining to confidential financial information protected under the Privacy Act. Each committee member has complied with all these provisions; there are no conflict-of-interest or appearance issues for any Committee members, nor did any individual need to be granted a waiver or be recused. Dr. Kooyoomjian further noted that the Form 3110-48 Financial Disclosure and Ethics Training was completed by all RAC members and is on file at the SAB, that there is no need for disclosure, and that there is no particular matter that may pose a potential conflict of interest, particularly, since this is an informational briefing and that no advice is being conveyed to the Agency. He advised that the Committee should briefly introduce themselves and their interest in relation to the briefing topic just to inform the interested parties and the public of their relations and experiences to the issues pertaining to the ERAMS briefing today. He also advised that the biosketches of each Committee member are posted on the SAB website (see Attachment F).

The Committee members briefly introduced themselves, starting with Dr. Lipoti, the Chair of the RAC. Dr. Lipoti then asked the members of the ORIA Staff and the public participants to introduce themselves. Mr. Lynn Ehrle representing the Cancer Prevention Coalition, proceeded to discuss his issues regarding makeup on the RAC membership. Dr. Kooyoomjian requested that this is not the proper venue to voice his concerns on this matter, since it is not germane to the subject of the ERAMS briefing. Mr. Ehrle thought that there was some connection, in that some low-level radiation issues might be a component of the ERAMS exercise, and that comments from the RAC on low level radiation issues are a cause of concern. Dr. Kooyoomjian advised Mr. Ehrle that the Ethics and FACA compliance Officer, Mr. Daniel Fort might be a useful person to touch base with on these other issues and asked Mr. Ehrle to

hold his comments to the appropriate time for public comments, and to please consider focusing his comments on the subject matter pertaining to the ERAMS briefing.

Dr. Vanessa Vu, Director, EPA/SAB Staff Office, made brief opening remarks, stressing that this activity is simply a briefing of the SAB's RAC by the ORIA Staff, and that a future exercise will likely involve the RAC, supplemented by specialty experts focused on the expertise needed for the ERAMS review activity, but could also involve forming a whole new panel, depending on what is needed to answer the charge questions. She further indicated to Mr. Ehrle that she is the official who should receive any comments pertaining to composition, makeup and expertise and points-of-view, and advised him that he should contact her pertaining to this matter he was raising.

Dr. Lipoti, Chair of the SAB's RAC, opened the meeting at 10:18 a.m., welcoming members and participants (Roster, Attachment A), and reviewed the meeting agenda (Attachment C). Dr. K. Jack Kooyoomjian, Designated Federal Official for the Radiation Advisory Committee highlighted the informational and briefing materials which had been provided to Committee and noted that the agenda, roster, biosketches, *Federal Register* announcement of the meeting, background materials and briefing material containing a power point presentation on the NMS Upgrade, on ERAMS were available on the SAB website (www.epa.gov/sab) in the section containing the meeting agenda (see Attachments A through E).

Overview of the Meeting:

Introduction to the NMS Upgrade: At 10:19 am, Mr. Barnes Johnson, Deputy Director of ORIA, gave some brief remarks, thanking the SAB's RAC for their time to listen to the briefing. He recognized that their participation to the SAB brings along a major commitment in their time and energies. He recognized that the Agency has sought the RAC's advice on two other times on ERAMS, and that the advice was well received and much appreciated by the ORIA Staff. He was also pleased that Dr. Janet Johnson, the immediate past RAC Chair was on the conference call, as she chaired the 2nd ERAMS exercise. Mr. Johnson remarked that these reviews have been very important for the ORIA Staff. He recognized that ORIA had received funding 2 years ago to re-do the radionuclide monitoring network, and that both he and the ORIA Office Director, Elizabeth Cotsworth, felt that input from the SAB before deployment would be helpful to enhance and develop the network. He also noted that the team has been in "overdrive" the past 2 years to gear up and move into the next generation of ERAMS. He closed his remarks by again thanking the RAC for looking into these issues pertaining to a reconfigured National Monitoring System (NMS/ERAMS).

Dr. Mary E. Clark, Assistant Director for Science of ORIA, stressed the coordination that has and continues to take place on the NMS/ERAMS activity between the staff at the National Air and Radiation Environmental Laboratory (NAREL) in Montgomery, AL, the Radiation and Indoor Environments National laboratory (RIENL) in Las Vegas, NV and the ORIA Headquarters (HQ) staff in Washington, DC, and especially the coordination by Dr. John Griggs

of ORIA/Montgomery, AL. She then introduced Dr. Griggs who began the 60-page briefing (see Attachment E-2 entitled “*Briefing on Proposed Upgrade and Expansion of the Air Network of the Environmental Radiation Ambient Monitoring System (ERAMS)*”).

Part 1 - Background, p. 5- 15:

Dr. John Griggs began the briefing with Part 1, touching on what is ERAMS now (p.1), the scope of the current system for air, precipitation, drinking water and milk (p. 2), the historical timeline for ERAMS from the 1950's thru 1960's, the 1970's thru the 1980's, the 1st SAB review on ERAMS reconfiguration in 1995 (EPA-SAB-RAC-ADV-96-003, dated April 5, 1996) the 2nd SAB review on ERAMS reconfiguration in 1998 (EPA-SAB-RAC-ADV-98-001, dated August 28, 1988), and implementation of the reconfiguration plan in 1999, the 2000 Los Alamos and Hanford fires, the 9-11 activity in 2001, the 2003 approval by OMB to have EPA expand and upgrade the air network, and progress made in 2004 on the NMS upgrade. He stressed that ERAMS is the only comprehensive nationwide network that has been continuously operating as a radiation monitoring network, that the system uses volunteer collectors, and that it operates in both routine and emergency modes. He noted that the current objectives (p. 10) are to provide data for nuclear emergency response assessment, ambient levels of radiation in the environment and to inform the general public and public officials. He described the ERAMS reconfiguration plan development and review resulting from the two SAB advisories (p. 11-13), the 9-11 impact (p. 14) which resulted in a heightened sense of urgency to improve the Agency's readiness posture, and the ERAMS assessment after 9-11, which reaffirmed air as the most important exposure pathway for likely incidents.

Part 2 - Concept for Upgrading Air Network, p. 16-20:

Mr. Robert Lowry presented the briefing for Part 2 for upgrading the air network. He stressed the use of both deployable and fixed monitors, the upgrade to real-time measurement with telemetry and the recommendation to increase the number of fixed monitors (for greater population and geographical coverage). He explained the intention of the upgrade to provide data quickly for decision makers to assess protective actions for the public, for dispersion modelers to validate and refine source term and meteorological assumptions and estimates, to provide data for assessing large-scale national impacts for follow-up monitoring assessment, as well as for population dose reconstruction. The reconfiguration should also allow for the development of baseline data for trend analysis and identification of abnormalities during normal operations. It was stressed that there are some functional limitations of the proposed reconfigured system, such as no monitoring of nuclear facilities, no early warning system for nuclear accidents, and no monitoring of the immediate locality of an incident which is addressed by EPA, and other state, federal and local mobile assets, such as field teams and mobile laboratories. He touched on major features of the system design.

A question and answer period followed. Some of the issues touched on included lessons learned, the inability to get some field data quickly, which might be enhanced by follow-up with more detailed data in the laboratory, the limited number of ERAMS air samplers, the utility of

mobile units which could be helpful to get better coverage and more critical data points. It was also noted that a fixed monitor may not be downstream from a plume, and that mobile monitors would be useful for a radiological dispersion device (RDD) event. The question was asked whether a fixed monitor could be moved and whether this was a helpful activity. It was thought that if the system was designed for the “big picture,” then moving some fixed monitors might be possible. The ORIA staff thought that they could look into the feasibility and pros & cons to move fixed monitors. A discussion followed on the availability of operators, power supply, etc. and other feasibility issues for moving fixed monitors to detect something like an nuclear explosion, rather than a dirty bomb. The ORIA Staff indicated that the NMS is capable of detecting both events, and the network will show inputs from around the country. Also, EPA and other agencies (e.g., DHS, DOE, FEMA, NOAA, NRC, USGS, etc.) have other assets, such as first responders, and other resources to deal with a variety of events and conditions.

The RAC members asked a broad range of questions, such as if there is some reason that Iodine 131 is not monitored in milk, what about strontium & cesium, and detection of domestic versus foreign sources? The Agency Staff responded that the focus of the network has changed over time to be more heavy on indicators, and that ERAMS can be used in any scenario for “big picture” issues, but generally is not focused on specific spills or incidents. A discussion followed on dispersion models, validating and refining source terms and meteorological assumptions and estimates, use of atmospheric test data from city-to-city, combining the ERAMS data with 1st responder data, combining and integrating ERAMS data with site specific data, how this relates to the Federal Radiological Emergency Response Plan (FRERP), relationship to terrorist events, etc. The thrust of the discussion focused on the primary objective of getting real-time data quickly to decision-makers. Questions arose about what sort of real-time dispersion data is being monitored, the relationship between EPA and other Agencies, and data from these various agencies, and whether some data might be redundant or supportive of the efforts to obtain useful information for decision-makers with similar or different purposes.

Part 3 - Monitoring Equipment: Fixed and Deployable Monitors, p. 21 - 35

Mr. Robert Lowry began this presentation, where he explained the general requirements for fixed monitors, discussed monitor evaluation and selection, the functional requirements and general specifications of the monitors, such as being able to monitor continuously at remote locations with minimal attention by a diverse mix of operators. The system also has to be a rugged, fully integrated monitoring system, having a feature to auto-start after power interruptions, and to be stable enough for remote calibration by telemetry. He touched on radiation detectors, air samplers, and anticipated operating modes.

Ms. Sara DeCair discussed deployable monitors (beginning on p. 29 of the power point presentation). She discussed what a deployable unit is, how they support the NMS (ERAMS) mission by improving system coverage, where the deployables are to be stored, and how they will be set up around the scene of a radiological incident or in the case of an imminent threat. She described the components of a deployable unit, the air sampler features, the gamma exposure instrument, the data logger, and measurement capabilities.

Part 4 - Siting - Fixed and Deployable Monitors, p. 36 - 53

Mr. Scott Teloski presented the siting of fixed and deployable monitors. He discussed the key features of the siting plan and the criteria initially considered, with the essential criterion being population. He introduced the two alternative methods for placing monitors in the approach to the siting plan, namely the population method and the area-population method, discussing features of each.

Ms. Jacolyn (Jackie) Dziuban touched on local siting issues for fixed monitors (p. 46 of power point presentation). She touched on the optimal location as a tradeoff with convenience, and the site-specific flexibility of criteria. Ms. Sara DeCair touched on siting deployable air monitors (p. 47 thru 53 of power point presentation) and issues of concern, such as deployment, operators, transporting of monitors, and deployment scenarios.

A discussion followed on such issues as micro climate and weather conditions and effects on deposition, that local variations can produce very different results, the cost of the units, and related issues.

Part 5 - Data Management, pp. 54-59:

Ms. Sara DeCair discussed the database, data management, data transmission and data dissemination, telemetry for deployables and fixed monitors. A discussion followed on the tradeoffs for the timeliness of deployment of monitors versus the cost.

Project Summary & Status, p. 60:

Dr. John Griggs of ORIA/NAREL reported on the Project Summary and Status, touching on the number of fixed stations (180) and deployable monitors (40) to augment the fixed network, the options being evaluated for telemetry to the centralized database at NAREL, the siting plan being developed to optimize the siting of fixed and deployable monitors, and the database development, which is also contingent upon actual equipment from the vendor. The ORIA Staff noted that with a significant amount of data coming into the laboratory, the ORIA/NAREL staff will be “tweaking” this as it comes along, and a significant aspect of this activity would be the SAB review.

The RAC members complimented the ORIA HQ staff and ORIA/NAREL and ORIA/RIENL staff on a very well planned and productive presentation. Questions followed on deployable monitors and if they would be deployed elsewhere, what approaches might be deployed to surround an “area of concern,” how long would it take to deploy the monitors and get the results, the expense of a 12 hour turn-around (the quickest and most expensive). Other questions were posed, such as situations involving large plumes or an improvised nuclear device, where there might be only 2 monitors in a plume. It was observed that the population dose (such as Chernobyl) is very small.

The RAC members foresaw no problems with the basic technical approach to NMS, but cautioned that the Agency Staff should be careful not to oversell their capabilities for post 9-11 monitoring. Some RAC members commented that perhaps the most useful data might be the “no effects” measurements. The ORIA Staff believes that the NMS Upgrade (ERAMS) has more utility than was perhaps indicated by some of the RAC members. It was acknowledged by ORIA Staff that the bulk of the routine ambient data isn’t likely to be substantially different.

A comment was made regarding how the data would be presented to the public. Also discussed was the need for more thought on analyzing trends in the data, which was also a comment in the earlier SAB reviews of ERAMS. A question arose whether there were any ORIA staff or other resources involved in public communication. It was acknowledged by the ORIA Staff that data sources, including mobile laboratories, need to be understandable to the public. A discussion followed on the aftermath of the Hanford and Los Alamos National Laboratory (LANL) fires from these sites and the manner of redistribution of the radioactive material.

The RAC members asked questions regarding the ability of the ORIA/NAREL staff to measure the broad range of analyses that might be necessary. The RAC observed that cross-media issues will be important. For instance, since the ORIA/NAREL staff are not in charge of the surface water monitoring, they need to figure how to coordinate this. Other issues were raised such as experiences regarding gases and alpha particles from the filters, detecting gases in general and how they are reflected in the measurements. It was recognized that capabilities involving measurement of particulate matter on air filters do not constitute real-time measurements. Discussion took place on the utility of plans to coordinate, educate and train local and state agency personnel on support services to this network, as well as crisis communication coordination and outreach training. It was suggested that the Agency might do well to consider scenarios such as “time zero” drills regarding deployment of assets and to “walk through” scenarios, which will likely help in answering a lot of questions.

The RAC asked if the Agency was looking into sensor web systems. The RAC members recognized that telemetry is for the fixed monitors, and observed that with the advent of sensor web-based systems, wireless lap tops should be able to enter into a protected website to perform a quick mode of telemetry. The ORIA staff indicated that they are looking at sensor web systems, but at this stage, the data is transmitted to a personal digital assistant (PDA) system.

It was asked if the data could be used for dose/risk assessment, and the ORIA staff thought that there might be some applicability to dose/risk assessments. The RAC observed that the location of fixed monitors is based solely on the basis of population, and asked whether risk or threat assessment are factored in. The ORIA/NAREL Staff responded that, given the scenarios they are dealing with, they felt that major population centers needed to be addressed primarily. The RAC noted that in the 1998 SAB review on ERAMS, a recommendation was made that ORIA collaborate with neighboring jurisdictions, such as Canada for monitoring along the border. The ORIA Staff indicated that they are still in the early stages of doing this. A question came up about Mexico, and it was noted that ORIA was not quite as far along in their

coordination with Mexico.

Public Comment: At 12:15 pm, Dr. Lipoti asked if there were any members of the public who wished to address this topic.

Mr. Lynn Ehrle requested to speak. Dr. Kooyoomjian asked if any others wished to speak, so we could equally allocate the time among the speakers, if necessary and Dr. Judith Johnsrud, Chair of the National Nuclear Waste Committee of the Sierra Club, and Director of the Environmental Coalition on Nuclear Power requested some time, as well.

Mr. Ehrle introduced himself and his background. He is a former Vice President of a Consumer Alliance. He is retired after a 35 year teaching career and serves “pro-bono” in the radiation and public health areas as a Senior Research Fellow with the Cancer Prevention Coalition. He is concerned with some of the comments he heard, and his observation is that some RAC members may have conflicts-of-interest (NOTE: The DFO interprets his terminology differently, to mean potential “biases” or points-of view, rather than conflicts of interest, as they are strictly interpreted and referred to by the Agency). Mr. Ehrle referred broadly to EPA, CDC, DOE and other federal Agency efforts to play down the effects of low dose radiation. He felt that everything seems to be driven by health concerns, and that in his view, ERAMS is a great opportunity to re-visit those health concerns. He talked about down-wind gases, and difficulties monitoring around nuclear power plants. He suggested that a minimum of six (6) nuclear power plants should be monitored for down-wind noble gases, internal and external emitters. He felt that the lack of monitoring by the ERAMS system around such plants creates an information gap and a problem, in his view. Further, he stressed that the nuclear power plants near major metropolitan areas, specifically New York City, Los Angeles, Chicago, Detroit (the Fermi Plant - and capturing the possible effects from Windsor, Ontario in Canada) would be particularly useful.

Mr. Ehrle felt that the Department of Homeland Security (DHS) has played down the effects of low dose radiation. He cited the Journal of the American Medical Association (JAMA), and articles (such as the November 28, 2003 article) on the effects of xrays and effects of low dose radiation in the 10 to 50 millisevert range on birth weight of children. Mr. Ehrle urged Dr. Vanessa Vu, Director of the SAB Staff Office, to bring into the SAB independent advisors to bring into this discussion a wider dispersion of viewpoints on this issue. Mr. Ehrle cited an affiliated organization, the Children’s Health Environmental Exposure Research Study (CHEERS), and the Conference of Radiation Control Program Directors (CRCPD), which is looking into the national children study to follow 100,000 children to age 20. Mr. Ehrle has provided information on CHEERS to the Conference of Radiation Control Program Directors (CRCPD) for their perusal.

Mr. Ehrle encourages the RAC to expand viewpoints and membership to look at emitters to internal organs, as opposed to strictly external dose. He identified soil dose as another area of concern for fall-out from isotopes and his concern for background levels of radiation which have been observed and measured in cores in the Arctic, in addition to results from the air monitors.

He again reiterated his concern to have air monitors and other detection devices over nuclear power plants in close proximity to major population centers. He believes that the Agency needs to co-locate and place these monitors in areas that ERAMS is monitoring, and that ERAMS should expand its scope in this regard. He reiterated his concern to have capabilities for threat assessment and the response time needed to make a difference for public safety.

Mr. Ehrle reiterated his concern over the issue of interpreting that negative data means that there is no problem. He noted that there have been other reports from Hanford on Iodine 131 releases and what he termed as cover-ups of those exposures.

Dr. Judith Johnsrud mentioned the Three Mile Island incident and the lengthy legal and administrative proceedings involved with Unit #1 and its re-start. She mentioned that there was a settlement on this matter which called for real-time monitors around Unit #1. She asked whether the Agency could obtain in-situ real-time monitoring. She also asked about the assumptions pertaining to close-in populations that might be affected by emissions, and was supportive of Mr. Ehrle's comments about monitoring around nuclear power plants near major population centers.

The public comment period closed at 12:32 pm.

Dr. Lipoti thanked Mr. Ehrle and Dr. Johnsrud for their comments. She noted that some of the issues of real-time monitoring may be helpful as background in the RAC's future face-to-face meeting on this topic. For instance, she suggested that it may be helpful to super-impose monitoring on the GIS map, and there may be an opportunity to consider some of these issues in the monitoring. Both Mr. Ehrle and Dr. Johnsrud thanked Dr. Lipoti for her work in New Jersey at the DEP and with the SAB's RAC.

With respect to the upcoming NMS Upgrade (ERAMS), Dr. Lipoti asked the Agency staff to think about what other pieces in terms of background would be helpful for reading by the RAC and whatever experts are ultimately selected by the SAB for this review. The RAC offered a number of additional suggestions and thoughts as to what might be helpful, such as:

- 1) documentation that explains the big picture and details as to how the monitoring decisions are made including the new National Response Plan (NRP), National Incident Management System (NIMS), and other plans for coordination among agencies and levels of government;
- 2) understanding the nature of the data, how the data is intended to be collected, integrated and interpreted (the SAB had in earlier reviews stressed the need for data interpretation); efforts to bound the uncertainty in the data;
- 3) some idea of the Agency's on-going efforts on outreach and coordination with other entities;
- 4) integration of data collected from the NMS Upgrade into the Radiological Response Plan, Federal Radiological Monitoring and Assessment Center (FRMAC) and the new Integrated Monitoring, Analysis and Assessment Center (IMAAC);
- 5) what data will be released to the public and how this would be handled;

- 6) some information addressing on data quality objectives (DQO), quality assurance and overall data quality issues, including such details as how often the monitors are calibrated; and
- 7) evaluation of measures and how Federal Guidance 13 is used.

The RAC then discussed timing issues. Dr. Vu indicated that the SAB has a process that we have to go through to plan a special panel, or to supplement the RAC with several experts, and to evaluate every candidate. It was thought that an administrative call would be helpful. Dr. Lipoti thanked the Agency Staff for a very efficient presentation, and Dr. Mary Clark thanked the RAC for their helpful inputs. Dr. Dodd asked if we will have an opportunity to discuss other projects, and Dr. Lipoti indicated that since this call consumed all available time on the NMS Upgrade (ERAMS), those other items would have to be picked up in future discussions.

Conclusion/Action Items/ Summary:

- 1) **ORIA Staff will Follow-upon a Variety of Suggestions Offered in the ERAMS Briefing:** ORIA Staff will consider a number of comments made by the RAC and the public on a wide variety of issues that came forward in the dialogue with the RAC members and the public on the briefing presentation as it prepares its review package for the SAB. Those suggestions will be incorporated by the ORIA Staff as appropriate in the future review materials.
- 2) **ORIA to Prepare ERAMS Charge Questions:** ORIA Staff will forward the Charge Questions to the RAC DFO, Dr. Kooyoomjian to initiate the process, so that the SAB Staff can begin to identify the expertise needs for this activity.
- 3) **Administrative Telephone Call with the RAC:** The SAB Staff will set up an Administrative telephone call with the RAC to discuss logistical, timing, and administrative issues on upcoming projects, including the NMS Upgrade (ERAMS).
 - a) In order to proceed with the Panel Selection Process, the SAB Staff will need to obtain the proposed charge from the ORIA Staff to identify the expertise needed for this future exercise,
 - b) Dr. Kooyoomjian will poll the RAC members for their availability, and
 - c) Final decision for panel selection will be made by the SAB Staff Office, after posting a *Federal Register* solicitation and reviewing all inputs in the normal course of Panel Formation.
 - d) Dr. Kooyoomjian will contact the RAC for their interest and availability, once the SAB Staff has received the proposed NMS Upgrade (ERAMS) charge questions.
- 4) **Scheduling Future Review of ERAMS and Federal Register Solicitation:** Because the *Federal Register* solicitation and Panel Selection process requires front end activity

ranging from 90 to 120 days, or longer, depending on the type of panel selected, the issues involved, and the schedule of availability of the potential panelists, the ERAMS Review likely take place no earlier than July, and likely would be scheduled sometime in the summer/early fall (July/Aug/Sept) time-frame.

- a) The face-to-face meeting will likely be preceded with a public conference call to discuss the charge, the adequacy of the review and background, and preliminary assignments to the panelists, and
 - b) The SAB Staff Office will initiate this process, which, among other activities, will involve preparation of a *Federal Register* solicitation for nominations to the ERAMS Review Panel following an administrative telephone call with the RAC and discussions with the ORIA Staff.
- 5) **Public Comments:** The DFO will capture highlights to the oral public comments made in the minutes documenting the conference call. However, the public commenters at the meeting and those registering an interest in the meeting indicated that they were interested in providing further comments to the SAB/RAC and the Agency.
- a) Commenters were advised to provide the DFO with additional comments for distribution to all parties. Additionally, Dr. Kooyoomjian requested that written comments be provided within 48 hours following the meeting, either by messenger or email to be included in the record and to be provided to the Committee and the Agency (see Attachment G), and
 - b) Those participants and registrants included the following:
 - 1) **Dr. Judith Johnsrud**, Chair of the Nuclear Waste Committee of the Sierra Club, and Director of the Environmental Coalition on Nuclear Power. (She forwarded written comments to the RAC DFO, Dr. Kooyoomjian on 3/2/05, see Attachment G-2);
 - 2) **Mr. Lynn H. Ehrle**, Senior Research Fellow, Cancer Prevention Coalition (His comments are pending as of 3/2/05). It should be noted that Mr. Ehrle raised comments pertaining to selection of future RAC members and with regard to balance on various issues and future reviews. Dr. Vu invited Mr. Ehrle to contact her to discuss appropriate steps to provide input to the Agency on these broader issues (He did not submit any written follow-up comments) ; and
 - 3) **Mr. Donovan Porterfield**, Los Alamos, NM (He forwarded written comments to the RAC DFO, Dr. Kooyoomjian on 3/1/05, see Attachment G-1).
- 6) **Logistics of Future Face-to-Face Review Meeting:** A brief discussion took place regarding where the actual face-to-face meeting for review of the NMS Upgrade (ERAMS) might take place. There was an inclination to consider meeting at the Montgomery, AL Laboratory where most of the ORIA/NAREL Staff are present. The ORIA Staff had indicated that some ORIA Staff are also at the RIENL in Las Vegas, NV, and others are at the ORIA EPA HQ in Washington, DC, but that most staff are at the NAREL in Montgomery, AL. The opportunity to examine the facilities, meet with staff, view the air samplers, etc. seemed to favor meeting at the Montgomery, AL facility, but that decision will be made at a future date.

There being no additional business to be discussed, Dr. Lipoti adjourned the meeting at 12:55 pm on February 28, 2005.

Respectfully Submitted:

Certified as True:

_____/s/_____
K. Jack Kooyoomjian, Ph.D.
Designated Federal Official
Radiation Advisory Committee (RAC)

_____/s/_____
Dr. Jill Lipoti, Chair
Radiation Advisory Committee (RAC)

List of Attachments

(From mailings as well as communications sent and received. See below for details.)

<u>Attachment</u>	<u>Description</u>
A	Radiation Advisory Committee (RAC) Roster dated April 22, 2004
B	Federal Register Notice: January 31, 2005, Vol. 70, No. 19, pages 4847-4848
C	Meeting Agenda dated February 1, 2005
D	Mailout dated February 4, 2005 from K. Jack Kooyoomjian, Ph.D., DFO/RAC, to RAC Members, entitled "Materials for the Radiation Advisory Committee (RAC) Pubic Conference Call of February 28, 2005 from 10:00 am to 1:00 pm EST" NOTE: The current package contains the following:
D-1	1) The memo dated February 4, 2005,
D-2	2) The RAC Roster dated April 22, 2004,
D-3	3) Proposed Agenda dated February 1, 2005,
D-4	4) The <u>Federal Register</u> notice announcing the RAC meeting published January 31, 2005 (Vol. 70, No. 19, pp 4847- 4848),
D-5	5) The Background Information for the RAC of the SAB entitled "Real-Time Monitoring of Radiation in Air in the United States: Updating and Expanding the Environmental Radiation Ambient Monitoring System (ERAMS), Prepared by ORIA, US EPA, January 24, 2005 (21 pages),
D-6	6) An undated writeup provide by ORIA to the SAB's Budget Review public meeting of December 1 & 2, 2004, entitled "RADIATION." (4 pages) describing a number of topics to beconsider for review by the SAB
	7) Proposed Project Sheets:
D-7-a	<u>Project Sheet 05-22: Review of Multi-Agency Radiation Survey & Site Investigation Manual (MARSSIM) Supplement: Multi-Agency Radiation Survey and Assessment of Materials and Equipment (MARSAME),</u>
D-7-b	<u>Project Sheet 05-23: Review of the Reconfigured Environmental Radiation Ambient Monitoring System (ERAMS),</u>
D-7-c	<u>Project Sheet 05-24: Updated Methodology for Estimating Cancer Risks from Exposure to Ionizing Radiation,</u>
D-7-d	<u>Project Sheet 05-25: Optimization of Radiological Emergency Cleanup Decisions</u>

<u>Attachment</u>	<u>Description</u>
E	Mailout dated February 23, 2005 entitled "Meeting Material for RAC's Feb. 28 th Conference Call," from K. Jack Kooyoomjian to RAC Members
E-1	1) The Background Information for the RAC of the SAB entitled " <i>Real-Time Monitoring of Radiation in Air in the United States: Updating and Expanding the Environmental Radiation Ambient Monitoring System (ERAMS)</i> ," Prepared by ORIA, US EPA, January 24, 2005 (21 pages) [this is also listed above as D-5], and
E-2	2) Power Point Presentation entitled " <i>Briefing on Proposed Upgrade and Expansion of the Air Network of the Environmental Radiation Ambient Monitoring System (ERAMS)</i> ," to RAC/SAB by ORIA, dated February 23, 2005 A 60-page briefing which includes the following: Part 1 - Background, p. 5- 15 Part 2 - Concept for Upgrading Air Network, p. 16-20 Part 3 - Monitoring Equipment: Fixed and Deployable Monitors, p. 21 - 35 Part 4 - Siting - Fixed and Deployable Monitors, p. 36 - 53 Part 5 - Data Management, pp. 54-59, and Project Summary & Status, p. 60
F	Biosketches of RAC Members
G	<u>Public Comments:</u>
G-1	Public Comments of Mr. Donovan Porterfield, entitled "EPA SAB RAC Feb. 28 teleconference - public participant," dated March 1, 2005; and
G-2	Public Comments of Dr. Judith Johnsrud, Nuclear Waste Advisor and Chair, National Nuclear Waste Committee and Director of the Environmental Coalition on Nuclear Power, Sierra Club, entitled "EPA SAB RAC ERAMS briefing: Sierra Club comments," dated March 2, 2005
H	<u>Chronological Correspondence:</u> (Contains related correspondence related to planning, preparation and follow-up for the meeting, running from Nov. 2004 to March 2005)
I	DFO Notes of 02/28/05 Conference Call (K. Jack Kooyoomjian)

End of Record