

**RFCA Stakeholder Focus Group
January 17, 2001
Meeting Minutes**

INTRODUCTION AND ADMINISTRATIVE

A participants list for the January 17, 2001 Rocky Flats Cleanup Agreement (RFCA) Stakeholder Focus Group meeting is included in this report as Appendix A.

Reed Hodgkin of AlphaTRAC, Inc., meeting facilitator, reviewed the purpose of the RFCA Stakeholder Focus Group and the meeting rules for this group. Introductions were made.

Reed reviewed the meeting agenda, which included:

- Progress Report on Agency Use of Focus Group Input
- New Science Outline and Wind Tunnel Detail Presentation/ Discussion
- Radioactive Soil Action Level (RSAL) Workshop Topics and Formats
- RESRAD Model Workshop - Objectives and Topics
- Land Use Scenarios Presentation and Frame Discussion

Reed asked the Focus Group if there were any changes or additions / corrections to the January 3, 2001 meeting minutes.

A member of the Focus Group asked why questions, answers, and comments in the meeting minutes were not attributed. Reed responded that this was done so that discussions would be associated with the focus group as a whole, rather than as conversations among individuals.

Reed indicated that a large effort was involved in producing meeting minutes at the current level of detail. He asked if this amount of detail was useful to the group. Although one member asked for briefer minutes, a number of Focus Group members indicated that the existing level of detail was useful and that the minutes were used for reviews and briefings. Reed agreed to continue producing meeting minutes at the current level and invited members to contact him with further suggestions.

RSAL REVIEW CONFERENCE CALLS

Reed introduced Jerry Henderson of the Rocky Flats Citizens Advisory Board (RFCAB) with a concern about the RSAL conference calls. Jerry noted that the RSAL conference calls had been discontinued and asked the group if there was a need for these calls. A group discussion followed.

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The U.S. Department of Energy (DOE) noted that the conference calls (which were expensive and effort intensive) had been discontinued because low participation by the community (one or two participants per call) indicated that there was no real need for the calls. A member of the Focus Group noted that the calls had not been well advertised, and that may have contributed to the lack of participation.

The discussion led toward a belief that the summary information presented in the conference calls would be useful for members of the community who could not attend the RSAL Working Group meetings.

It was noted that a summary of decisions and action items is created at each RSAL Working Group meeting. It was agreed that this summary would be submitted to AlphaTRAC, Inc., which would distribute it by email to Focus Group members.

It was also noted that John Marler develops summaries of the RSAL Working Group meetings for the Rocky Flats Council of Local Governments (RFCLOG). He agreed to check with the RFCLOG to determine if the summaries can be more widely distributed. If the RFCLOG agrees, AlphaTRAC, Inc. will distribute these summaries to Focus Group members by email.

PROGRESS REPORT ON AGENCY USE OF THE FOCUS GROUP INPUT

One of the primary goals of the RFCA Stakeholders Focus Group is to provide input to the RFCA Agencies regarding decisions about cleanup at Rocky Flats. The RFCA Agencies have agreed to periodically provide feedback to the Focus Group on how the group's input is being used.

Tim Rehder of the U. S. Environmental Protection Agency (EPA) stated that Focus Group input was currently being used to create a revision of the Regulatory Analysis (Task 1) report on the RSAL Review.

He indicated that one key input was the need to address a preference in the Nuclear Regulatory Commission (NRC) regulation for cleanup to unrestricted release. He stated that the revised regulatory analysis approach calls for development of an RSAL for anticipated use and an RSAL number for unrestricted use. Then the DOE would have to demonstrate why they can not achieve the RSAL for unrestricted use in each individual cleanup using the As Low As Reasonably Achievable (ALARA) approach.

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Joe Legare of DOE responded, stating that some of the language was still being negotiated among the RFCA Agencies. He indicated that DOE's perspective was to use ALARA to prove that cleanup at a specific site would result in doses or risk that were "as low as reasonably achievable" and that the unrestricted use RSAL value would be a target. He indicated that there was no burden of proof for why the unrestricted value could not be reached, but rather a burden of proof for why the cleanup level achieved was "as low as reasonably achievable." DOE and EPA agreed that they were in agreement and that the language would be worked out.

Tim stated that another influence from the Focus Group was on the choice of risk level within the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) risk range. Based on Focus Group input, the full CERCLA range will be examined, not just 10^{-4} . This will be accomplished by calculating RSAL values for 10^{-4} , 10^{-5} , and 10^{-6} .

Tim also noted that the Focus Group had asked for an independent peer review of the RSAL Review process, and that the agencies had agreed and DOE was funding the activity.

Tim stated that the Focus Group had asked for Workshops concerning the RSAL review and that DOE had agreed to fund the workshops.

Steve Gunderson of the Colorado Department of Public Health and Environment (CDPHE) added that the RFCA Agencies were putting a great deal of effort into involving the community through the Focus Group and other means. He stated that the effort was much greater than originally anticipated. Most of this effort was going to informing the community about the cleanup process and responding to community requests for analysis and information.

Joe Legare of DOE said that the agencies were working very hard to meet their commitment of "no surprises." He reminded the members of the Focus Group that this was a two-way street.

Reed closed the conversation by noting that the RFCA Focus Group is a unique attempt on the part of the agencies and the community to work collaboratively throughout the cleanup process.

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NEW SCIENCE OUTLINE AND WIND TUNNEL DETAIL PRESENTATION / DISCUSSION

New Science Outline

Joe Legare of DOE briefed the Focus Group on the current outline for the New Science Report for the RSAL Review (see Appendix B for the outline). Joe introduced Sandi MacLeod of DOE and indicated that Sandi would be authoring the report. He asked that the Focus Group review the outline and the information provided in the briefing and submit comments and suggestions (especially for additional topics) back to Sandi. He then briefly summarized progress in the main areas of new science.

Fires

Information and knowledge gained from the wildfires of 2000 at DOE sites will be collected and reported.

A member of the Focus Group asked that the findings from the Secretary of Energy's national review panel on wildfires be incorporated. DOE agreed.

Air Resuspension Model

Radian Corporation has been contracted to review and report on the differences in the air resuspension approaches in the three versions of the RESRAD model - Version 5.8, the Risk Assessment Corporation (RAC) version and Version 6.0.

Wind Tunnel Studies

The results and implications from the recent wind tunnel studies of resuspension following fires at Rocky Flats (prescribed burn and wildfire) will be analyzed and reported.

Actinide Migration Evaluations

DOE and Kaiser-Hill have been investigating particulate transport and solubility for some time. The report will summarize these new findings about the behavior of plutonium in the environment.

Status of Other Topics

Biological Effects of Ionizing Radiation (BEIR) Studies

The New Science Report will summarize the latest findings from the BEIR studies.

Joe indicated that the schedule for the New Science report would be updated in a meeting on January 18, 2001. He asked for comments.

A member of the Focus Group indicated that the new findings on cancer risk slope factors and dose conversion factors should be included in the New Science Report. Joe agreed.

Wind Tunnel Detail Presentation

Bob Nininger of Kaiser-Hill gave a summary briefing on the Wind Tunnel study.

Bob stated that the wind tunnel studies had been conducted to gather site-specific information on the resuspension of soil by wind at Rocky Flats. It was felt that the generic data found in the literature may not be sufficiently representative for this important exposure pathway.

Bob presented a briefing that summarized three topics:

- The wind tunnel and its operation,
- The wind tunnel tests at Rocky Flats, and
- Initial results from the wind tunnel tests.

The briefing slides are unavailable. They will be sent as soon as received.

A discussion followed the presentation.

A member of the Focus Group noted that the reduction in resuspension over time since the prescribed burn (as shown in wind tunnel test results) could be due to factors other than vegetation recovery after the burn. For instance, soil blown away by the wind while the surface was bare would not be available for later resuspension.

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It was noted that the wind tunnel is not an exact replication of the winds at Rocky Flats, because the gustiness of the winds could not be fully reproduced in the wind tunnel.

A member of the Focus Group asked how long after a wind event would particulates be available for resuspension again. Bob answered that cracking of the soil, freeze/thaw cycles, etc. would probably make material available again in 1 - 2 weeks.

A member of the Focus Group noted that a probabilistic distribution of mass loading for resuspension would be the hardest input to develop for the RESRAD model. Bob responded that the episodic nature of wind resuspension would make it difficult to come up with the representative annual values that RESRAD would need, but that the meteorological data needed to do the analysis was available.

A comment was made that a peer review of the original wind tunnel study questioned the placement of the wind tunnel with respect to the wind. Bob responded that the wind tunnel investigated the microphysics of resuspension and that it generated its own wind.

A Focus Group member noted that a peer reviewer had commented that the directional alignment of the wind tunnel might be important because winds from different directions might resuspend material differently. Bob responded that the wind tunnel was set down on several undisturbed patches within an overall study area. There was no attempt to align it in specific directions because it wasn't felt that there was a directional preference for resuspension.

RSAL WORKSHOPS TOPICS AND FORMATS

Reed introduced the topic, saying that the objective for the discussion was to decide on the topics and formats for the upcoming RSAL workshops. He told the group that he had asked Gerald DePoorter to develop and present a strawman to initiate the discussion, in part because Gerald understood the background for a similar request made by the RFCAB.

Gerald began his presentation by emphasizing that he was not representing the RFCAB, but was rather presenting his ideas as an individual member of the Focus Group (see Appendix C for Gerald's slide presentation). He summarized a two workshop series:

- Workshop 1: RESRAD 6.0 and Its Use, and
- Workshop 2: Parameter Selection for RSALs at the RFETS.

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He indicated that the purposes for the RESRAD workshop would be:

- Overview of what RESRAD 6.0 calculates,
- Describe in general terms how the calculations are performed,
- Describe what is required to be able to run the code, and
- Walk through a sample problem step-by-step.

Hands-on computer operation (model runs) by the participants would be a distinguishing feature of this workshop.

The purpose for the Parameter Selection workshop would be:

- Assemble together technical experts in a panel format to discuss, debate, and answer questions on the selection of the parameters to be used in the RESRAD 6.0 calculations for the RFETS RSALs.

A group discussion followed Gerald's presentation.

The group was divided on whether hands-on training for operating RESRAD 6.0 was an important workshop activity.

The idea of holding training as a separate meeting or a separate session during the workshop was raised.

The possibility of using local resources to conduct initial RESRAD training was brought up, to be followed by an "advanced" session with experts on the code from Argonne National Laboratory.

It was noted that it would be essential that experts from Argonne National Laboratory and from the RAC (John Till) participate in person.

Ways to minimize the number of separate trips and maximize the usefulness of the out-of-town experts were presented and discussed.

The need to address dose conversion factors and risk slope factors was raised.

The possibility of having a separate workshop on the regulatory basis for RSALs was raised. This workshop might include representatives from EPA, DOE, and NRC.

At the end of the discussion the following meetings were outlined:

1. RESRAD Training Class
 - Occurs before the main workshops
 - Taught by local resources
2. A two-day Workshop

Day 1: RESRAD

Early morning: "Advanced Seminar on Operating RESRAD"
Taught by: Argonne National Laboratory and RAC

Late Morning and Afternoon: "The RESRAD Model and its Application to RSALs at Rocky Flats"

Topics:

- Basis for RESRAD
- Application of RESRAD in RAC study
- Changes to RESRAD and effects
- Risk / probability in RESRAD 6.0
- Parameters chosen for RESRAD
- Applicability to RFETS
- Ground and surface water in RESRAD
- RAC views on RESRAD implementation
- Questions regarding RAC study
- Questions regarding 6.0 source code

Day 2: Parameters for RSAL Development at Rocky Flats

Topics to be determined, but will include Dose Conversion Factors and Risk Slope Factors

Taught by: Argonne National Laboratory and RAC

A suggestion was made that a committee be formed to develop a detailed workshop design for submittal to the Focus Group at the January 31, 2001 meeting. The following Focus Group members volunteered to develop the design:



- Victor Holm,
- Gerald DePoorter,
- Kent Brakken,
- John Marler.

LAND USE SCENARIOS PRESENTATION AND FRAME DISCUSSION

Steve Gunderson of CDPHE briefed the Focus Group on the land use scenarios selected for the RSAL Review. A summary of the land use and exposure scenarios is provided in Appendix D.

Steve indicated that five land use scenarios would be analyzed in the RSAL Review:

Open Space (Buffer Zone Only - RFCA Scenario) - The Open Space Scenario anticipates access by the public to large portions of the Site in a manner similar to in a manner similar to how open space areas similar to RFETS are used in Jefferson or Boulder county. Stay times and open space usability would be based upon the most recent survey data from Jefferson County.

Office Worker (Industrial area only - RFCA Scenario) - The Office Worker Scenario is described by RFCA and is oriented toward the potential for the industrial area to be the site of commercial activity post interim site condition. There are currently no plans for such use.

Refuge Worker (considered most likely future land user for bufferzone) - If the proposed legislation for designation of Rocky Flats as a wild life refuge is adopted, the most likely future user will be the Wildlife Refuge worker (WRW). Significant survey data from California and Colorado has been collected regarding the activities associated with the WRW, and will be used to help define the RF WRW activities and potential for exposure.

Suburban Resident (failure of institutional controls) - Some institutional controls are anticipated as part of the final site remedy. If ICs fail, the default land-use scenario will be a future suburban resident. This is based in large measure on the development patterns being witnessed today in Northeast Denver.

Resident Rancher - The Resident Rancher is not considered realistic, either for the future land user, or for institutional control failure, but RSALs protective of the resident rancher will be calculated.

Steve indicated that RSALs would be calculated for both adult and child user for the open space user, the suburban resident, and the resident rancher. Four different adult exposure scenarios would be applied for all land use scenarios:

- 25 mrem dose,
- 10^{-4} risk,
- 10^{-5} risk, and
- 10^{-6} risk.

The 25 mrem dose exposure scenario would be calculated for child users.

A brief discussion followed the presentation.

A member of the Focus Group asked about the scientific basis for choosing the scenarios. The agencies responded that the basis for the scenarios selected would be discussed in the Task 1 report, while the details of the scenarios would be presented in the Task 3 report.

A member of the Focus Group asked if it would be possible to assume a longer residency time than the 30 years recommended in CERCLA. The agencies responded that RESRAD could run a longer residency time, that the choice of 30 years is a parameter issue rather than a modeling issue. The 30 year exposure duration is used because it is the 90th percentile residency period for the United States. There is some guidance from EPA Region VI that 40 years may be more appropriate for a rancher.

A member of the focus group commented on the CERCLA term "reasonably maximally exposed individual." "Does that mean the period that the wildlife refuge might exist? Or does that mean for the period that the plutonium might remain dangerous? Let's be real and think about that question and not simply assume that a bill passed in Congress next year or the year after is going to define conditions at Rocky Flats forever. We all know that isn't the case."

CDPHE commented that the RAC study had shown that the period immediately after cleanup was responsible for most of the dose from the residual contamination and that contributions from later years drop off rapidly due to weathering and other physical forces.

Steve Gunderson of CDPHE closed the discussion by pointing out that residual contamination would remain after cleanup at Rocky Flats. Crafting the agreement for

long term stewardship - institutional controls, surface water protection, etc. will be a critical step in the overall cleanup process and will be an essential dialog among the agencies and the community.

Agenda Items

The focus group agreed on the following topics for the next two meetings:

January 31, 2001

- RSAL workshop design team report back and discussion
- Regulatory Analysis questions for peer reviewers
- Land use scenarios - continued discussion

February 14, 2001

- Revision 2 of the Regulatory Analysis report - discussion
- RSAL Working Group progress report
- Review of RESRAD 6.0 approach to air pathway

ADJOURNMENT

The RFCA Stakeholder Focus Group meeting was adjourned at 6:30 p.m.

Summary of Actions and Commitments

- Provide summaries of RSAL Working Group meetings (action items and decisions) to AlphaTRAC, Inc. for distribution (Agencies).
- Distribute summaries from RSAL Working Group meetings to Focus Group members via email (AlphaTRAC, Inc.).
- Check with the RFCLOG to see if the interested members of the community can be copied on the RSAL Review Working Group Meeting Summaries developed for RFCLOG members (John Marler).
- Distribute RFCLOG summaries from RSAL Working Group meetings to Focus Group members via email if RFCLOG agrees (AlphaTRAC, Inc.).
- Incorporate findings from DOE national wildfire review panel in New Science Report (DOE).

- Incorporate new findings on cancer risk slope factors and dose conversion factors should in the New Science Report (DOE).
- Develop a proposed design for two RSAL Workshops and present the design to the Focus Group at the January 31, 2001 RFCA Focus Group meeting (Workshop Design Committee).
- Identify guidance used in selecting land use scenarios for RSAL development and provide to the Focus Group at the January 31, 2001 Focus Group meeting (DOE).

Appendix A
1/17/01 Participants List

**Appendix B
Joe Legare: New Scientific Information Report Outline**

Appendix C
Gerald DePoorter: RESRAD 6.0 Workshops

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Appendix D
Steve Gunderson: Summary of Land Use and Exposure
Scenarios to be used in Calculating the RSAL for Rocky Flats
Cleanup

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