

**RFCA STAKEHOLDER FOCUS GROUP
REVISED MEETING AGENDA**

When: February 28, 2001 3:30 - 6:30 p.m.

Where: Anne Campbell Room, Arvada City Hall

- 3:30-3:40 Ground Rules, Introductions, Agenda Review, 2/14/01 Meeting Minutes Review
- 3:40-3:50 Environmental Restoration Big Picture – A Holistic View of Where We Are
- 3:50-5:10 Risk Management and ALARA - Presentation and Discussion
- 5:10-5:15 RSAL Review Schedule
- 5:15 – 5:25 Break
- 5:25-6:25 RFCA Focus Group Meeting Process Discussion
- 6:25-6:30 Set Future Agendas and Review Meeting
- 6:30 Adjourn

**RFCA Stakeholder Focus Group
Attachment A**

Title: **REVISED** Agenda for February 28, 2001 Focus
Group Meeting

Date: February 26, 2001

Author: C. Reed Hodgins
AlphaTRAC, Inc.

Phone Number: (303) 428-5670

Email Address: cbennett@alphatrac.com

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RFCA Stakeholder Focus Group
February 28, 2001
Meeting Minutes

INTRODUCTION AND ADMINISTRATIVE

A participants list for the February 28, 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 Focus Group. Introductions were made. Each participant stated their primary interest in participating in the Focus Group.

Reed asked the Focus Group if there were any changes or additions / corrections to the February 14, 2001 meeting minutes. There were no corrections noted.

A member of the Focus Group noted that the pre-meeting packets were intended to include technical background information to prepare the participants for each meeting. He noted that recent packets had not included such information and that he felt less prepared to participate in discussions as a result. Reed suggested that the Focus Group identify at the end of each meeting the background materials needed from the agencies in the next packet.

A member of the Focus Group noted that the agendas for the Focus Group meetings were being modified between meetings and expressed concern that the need for focused discussions was being impacted. Reed responded that he had added the Big Picture presentation to help set the stage for the Group's process discussion.

Reed reviewed the meeting agenda, which included:

- Environmental Restoration Big Picture – A Holistic View of Where We Are
- Risk Management and As Low as Reasonably Achievable (ALARA) - Presentation and Discussion
- Radioactive Soil Action Level (RSAL) Review Schedule
- RFCA Focus Group Process Discussion

ENVIRONMENTAL RESTORATION BIG PICTURE

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Joe Legare, U.S. Department of Energy (DOE), presented a graphic showing the interrelationship among the cleanup-related activities and programs at Rocky Flats. The intention was to step back and examine the holistic view of cleanup – the major pieces of the process, how they fit together and how they affect each other.

Joe noted and briefly described the major components of the chart:

- Principle regulatory drivers
 - Applicable or Relevant and Appropriate Requirement (ARARs)
 - Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)
 - RFCA
- CERCLA Evaluation Criteria
- ALARA
- Stewardship Planning
- Water Management
 - Water strategy
 - Water balance study
 - Actinide migration study
 - Soil erosion modeling
- Land Management
 - Review of the Wildlife Refuge system
 - Vegetation Management Plan
 - Threatened Species Protection
- Engineered Controls
 - Passive barriers for treatment of groundwater
 - Operations and Maintenance of engineered controls
 - Administrative controls
 - Post-closure reviews

- Industrial Area Sampling Analysis Plan
- Buffer Zone Sampling Analysis Plan

A member of the Focus Group noted that the RFCA agencies were balancing the need for the best possible cleanup against constraints such as the amount of funding available to do cleanup and the limited technology to perform cleanup. He read from a U. S. Supreme Court decision on setting air pollution standards, noting that the Supreme Court had declared that the cost of achieving an air quality standard must not be considered in setting the standard. He stated that costs should not be a consideration in setting the standards for cleanup at Rocky Flats – the standards should be set, then the costs communicated to the federal government.

A member of the Focus Group replied that funding at Rocky Flats was not a consideration for setting the standards – they were already established in the applicable regulations. Rather, cost at Rocky Flats was a consideration for how the standards and requirements would be implemented at the site.

RISK MANAGEMENT AND ALARA

Joe Legare introduced the ALARA discussion. He noted that ALARA was a key component of the overall cleanup picture at Rocky Flats and was yet to be fully defined. He suggested a multi-part discussion that would start with the historical basis for ALARA, move to an understanding of how ALARA is being applied in other cleanup situations, and then use that knowledge to design an ALARA approach for Rocky Flats. He indicated that the focus of today's discussion would be on the historical basis for ALARA – risk management and occupational ALARA.

Joe then introduced the three presenters from Rocky Flats.

Ed Wilkes of DOE briefed the group on "Radiation: Risks and Realities." (Appendix B).

Bruce Wallin of DOE discussed risk management and integrated risks (Appendix C). He focused on the Integrated Safety Management System that had been implemented at Rocky Flats. The key elements of Integrated Safety Management are:

- Define the scope of work
- Analyze the hazards
- Develop and implement hazard controls
- Authorize and perform work within the controls
- Feedback and continuous improvement

Robert Bistline of DOE made a presentation on understanding risk (Appendix D). He compared risks from radioactive substances and operations to other risks that people encounter.

A member of the Focus Group noted that there was a great deal of controversy about the effects of radiation at low doses and that the shape of the dose response curve at these levels was not certain or well agreed upon. He also stated that it was important to differentiate between voluntary risk and involuntary risk, and that it was important not to compare voluntary to involuntary risks.

A member of the Focus Group stated that he hoped the discussion would lead to the role that ALARA plays in RSALs and cleanup levels, especially the question of whether ALARA plays a part in setting the RSAL itself, or is involved in selecting remedies.

Another member of the Focus Group noted that the RFCA agencies had stated unequivocally at the last Focus Group meeting that ALARA has no involvement in setting RSALs, but is only involved in establishing cleanup levels for specific cleanup sites. He expressed frustration that the issue was settled, but still under discussion.

He asked about the usefulness of having a discussion on risk and ALARA when ALARA had no bearing on the RSAL discussion currently underway in the group. He felt that the dialog was being confused by addressing two unrelated topics concurrently.

DOE responded that the ALARA topic had been introduced because of a need to broaden the discussion so that the holistic picture could be addressed. He expressed a need for the Focus Group to treat more of the Big Picture than just the RSAL issue. He indicated that the risk discussion was pertinent to several issues, including the setting of RSALs and ALARA.

EPA noted that the ALARA discussion was pertinent now because the Task 1 report had discussed how RSALs, cleanup levels, and the application of ALARA were interrelated – that ALARA was an important link between RSALs and cleanup levels.

The member of the Focus Group stated that it was important to establish, then follow, a framework for the Focus Group discussions. It is important to understand why the group is discussing a particular topic at a particular time and how it fits in with the other topics on the table.

CDPHE stated that the agency wanted to be comfortable with how ALARA was going to be applied to reaching cleanup levels before going public with recommended RSALs.

RFCA FOCUS GROUP PROCESS DISCUSSION

Reed dismissed the participants from the RFCA agencies so that the members of the community could have a community-only discussion of process.

Reed began the discussion with some facilitation observations and suggestions:

- Focus Group Process - Observations
 - Focus Group is sometimes, but not always, meeting its purpose
 - Many discussions are meaty and productive - those that are closer to technical issues
 - Some discussions are not very productive - those that are closer to value issues
 - Focus Group is not sufficiently collaborative
 - Members are working from positions rather than interests

- Many participants - community and agency - are imputing motives to others
- Attacks are expected and provided - the need for protection from each other is frequent
- Technical staff are sometimes afraid to come before the group
- Bottom line - there is insufficient trust to allow collaboration
- The result - an adversarial environment
- Suggestions
 - Agree on a common interest to drive the work of the Focus Group
 - Identify questions and issues that are critical to discuss
 - Deliberately collaborate on these issues - demonstrate trust by opening discussion to interests where possible, and being clear about positions
 - Assume openness and honorable intentions rather than hidden agendas
 - Hold yourselves and each other accountable for how you behave.

The members of the community then discussed the process of the Focus Group and reached the following conclusions (a summary report is provided in Appendix E).

Focus Group Goals, Objectives, and Interests

Community Goal for the Focus Group:

To achieve the best possible cleanup of Rocky Flats.

Community Objectives for the Focus Group:

- Get complete information about cleanup-related studies and decisions throughout the cleanup process
- Influence the agencies in their cleanup decisions
- Get clear understanding of agency decisions
 - Get clear understanding of the technical basis for decisions
 - Get clear understanding of the policy implications of decisions
 - Know when a decision has been made – as soon as possible in the decision-making process

Community Interests for the Focus Group:

- Collaborate with agencies on cleanup analyses and decisions
- Understand the objectives for each discussion
- Get closure on each issue addressed
- Collaborate with agencies on setting Focus Group agendas

Needed Revisions to the Focus Group Process

- The agencies and community should work together to set the path forward for the Focus Group.
- The Focus Group should establish a steering committee to set the agenda for each meeting. The steering committee should include representatives from the Rocky Flats Citizen's Advisory Board (RFCAB), the Rocky Flats Coalition of Local Governments (RFCLOG), and the agencies.
- Agendas should be structured so that there is sufficient time for a full dialog on each issue addressed.
- The agencies should provide background information on each issue to be discussed in the packet prior to the meeting.
- There should be a round robin at the end of each meeting to get a key thought from each participant (a decision to pass will be honored).
- A holistic "check-in" should be part of every meeting – where we are in the big picture and where we are going next.

The members of the community determined that the March 14, 2001 meeting should be dedicated to setting the path forward for the Focus Group and to establishing a process for reaching closure on each issue addressed by the group. The path forward should be

based on a current, comprehensive outline of upcoming cleanup decisions and issues, brought to the Focus Group by the agencies.

ENVIRONMENTAL RESTORATION STAKEHOLDER PARTICIPATION SCHEDULE

A schedule for upcoming environmental restoration document reviews was distributed to the Focus Group along with a request for the Focus Group to decide how it wished to be involved in the reviews (Attachment F). The schedule was not discussed by the Focus Group in this meeting due to time constraints.

ADJOURNMENT

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

**RFCA Stakeholder Focus Group
February 28, 2001
Meeting Minutes**

**Appendix A
Participants List**

**RFCA Stakeholder Focus Group
February 28, 2001
Meeting Minutes**

Appendix B

**Tim Rehder: Regulatory Analysis Report, Revision 2 –
Discussion RSAL Peer Review Update and Discussion**

**RFCA Stakeholder Focus Group
February 28, 2001
Meeting Minutes**

**Appendix C
Martha Hyder: Review of RESRAD 6.0 Approach to Air
Pathway**

**RFCA Stakeholder Focus Group
February 28, 2001
Meeting Minutes**

**Appendix D
Ken Korkia: Report-back from Workshop Design Group**

**RFCA Stakeholder Focus Group
February 28, 2001
Participants List**

NAME		ORGANIZATION / COMPANY
David	Abelson	RFCLOG
Christine	Bennett	AlphaTRAC, Inc.
Lane	Butler	Kaiser-Hill Company, LLC
Kimberly	Chleboun	RFCLOG
John	Ciolek	AlphaTRAC, Inc.
John	Corsi	Kaiser-Hill Company, LLC
Carol	Deck	Kaiser-Hill Co, LLC
Rick	DiSalvo	US DOE - RFFO
Sam	Dixion	City of Westminster
Shirley	Garcia	City of Broomfield
Aaron	Grider	Jefferson County
Steve	Gunderson	CDPHE
Jerry	Henderson	RFCAB
Reed	Hodgin	AlphaTRAC, Inc.
Victor	Holm	RFCAB
Jeremy	Karpatkin	US DOE - RFFO
Paul	Kilburn	JCNA
Joe	Legare	DOE
Jean	Lillich	
Ann	Lockhart	CDPHE
John	Marler	RFCLOG
Tom	Marshall	Rocky Mountain Peace and Justice Center
Robert	Mastro	DOE Comm.
LeRoy	Moore	RMPJC
Sheila	Plunkett	Rocky Mtn Peace and Justice Center
Tim	Rehder	US EPA
Mark	Sattelberg	US Fish and Wildlife Service
Kathy	Schnoor	City of Broomfield
Joel	Selbin	
Dave	Shelton	Kaiser-Hill Company, LLC
Carl	Spreng	CDPHE



**RFCA Stakeholder Focus Group
Participants List**

**Broomfield City Hall
January 31, 3:30-6:30 p.m.**

Ken	Starr	TCAT / RFSALOP
Noelle	Stenger	RFCAB
George	Vancil	City of Arvada

INTEGRATED SAFETY MANAGEMENT SYSTEM VERIFICATION

(ISMSV)

ENABLING PRINCIPLES AND CORE REQUIREMENTS

From the initial ISMSV, it became evident it would be helpful in the design of future reviews to have a set of core requirements upon which the review could be based. The following core requirements were developed from the requirements of the DOE P 450.4, the requirements of the DEAR, and the fundamental attributes which support implementation of the Integrated Safety Management System.

A. The following core requirements should permit a full evaluation of an Integrated Safety Management System (ISMS) at a site, a facility, an activity, or a process. Completion of the 13 enabling principles will verify successful implementation of ISMS.

1. Consistent and Responsive ISMS Description.

The ISMS description should be consistent with DOE P 450.4, the DEAR, and the guidance as to the expectations for integrated safety management provided to the contractor by the Approval Authority.

2. Define the scope of Work.

This requirement should be assessed at each organizational level, (e.g., from the sitewide mission tasks to the processes at an individual facility to the individual operational or maintenance item within a facility). Only through clear definition of the work, is it possible to manage the work safely. Some elements of this requirement, as discussed in DOE P 450.4 include the statement, "Missions are translated into work, expectations are set, tasks are identified and prioritized, and resources are allocated."

3. Analyze hazards

This requirement should be assessed at each organizational level from the work defined in the sitewide mission tasks (as in an Environmental Impact Statement [EIS]) to the processes at an individual facility (as in a Safety Analysis Report [SAR]) to the individual operational or maintenance item which is contemplated within a facility (as in a Process Hazard Analysis [PHA] or an Radiological Work Permit [RWP]). The hazards which are analyzed should include nuclear as well as chemical and common industrial hazards. The analysis should be balanced to the complexity of the work as well as the significance of the risk. As described in DOE P 450.4, "Hazards associated with the work are identified, analyzed and categorized."

4. Develop Controls

Controls are developed which provide satisfactory mitigation for the hazards which have been analyzed. The controls may include programmatic, administrative, and engineering requirements. Those controls should be appropriate to the hazards which have been identified for work at all levels from the sitewide mission to the facility processes to the individual operation or maintenance action. As specified in DOE P 450.4, the controls include "applicable standards and requirements which are identified and agreed-upon, controls to prevent/mitigate hazards are identified, and the safety envelope is established."

5. Implement Controls

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The ISMS should provide for a method to implement the controls identified at every level of work and hazard. The methods should provide for assurance that the controls remain in effect so long as the hazard is present.

6. Operations Authorizations

The ISMS should provide for gaining authorization to conduct operations. Provisions should be included to grant operations authorizations for each level of effort at the site, facility, activity, or process. Such provisions or procedures may include an Operational Readiness Review, approval to resume operations following a week-end shutdown, and authorization to start individual procedures or work items through mechanisms such as work clearance permits, shift orders, or shift managers control. The ISMS should also provide for updating and configuration control for the operations authorization documentation such as Authorization Agreements, permits, SARs, etc.

7. Perform Work within Controls

Procedures and programs should be adequate to insure that work is performed within the controls which have been developed and implemented. Controls may include site or facility commitments such as conduct of operations and maintenance programs, worker safety programs, specified engineered safety systems, or specific controls in worker safety permits. The controls may be specified in site-level programs or facility specific authorization bases documents. The ISMS should include provisions to insure that on-going work continues to be performed within the specified and agreed-upon controls.

8. Provide Feedback and Continuous Improvement

All aspects of the ISMS should be subject to continuous improvement through an assessment and a feedback process. At each level of work and at every stage in the work process planning, the feedback and continuous improvement programs should be functioning. Feedback information on the adequacy of controls is gathered, opportunities for improving the definition and planning of work are identified and implemented, line and independent oversight is conducted, and if necessary, regulatory enforcement actions occur.

9. Line Management is Responsible for Safety and Clear Roles and responsibilities are established and maintained.

At every level of control, line management must be responsible for safety. Clear and unambiguous roles and responsibilities should be defined and maintained at all organizational levels within the organization defined by the ISMS description. All aspects of work identification, planning and control must be executed under the control and responsibility of line management. Support organizations such as ES&H or personnel departments must have clearly defined roles and responsibilities which insure work is performed safely within the clearly defined principle that line management is responsible for safety.

10. Competence is Commensurate with Responsibility.

Personnel shall possess the experience, knowledge, skills, and abilities that are necessary to discharge their responsibilities. All organizations and activities within the ISMS should be evaluated to insure that the competence is commensurate with the assigned responsibilities. Support and line personnel, workers as well as managers, should be included within the verification of this core requirement. The actual competence as well as the programs to define the expectations, provide the training, and evaluate that expectations are met, should be assessed. The process for the determination of the required competence should consider the roles and responsibilities of each position.

11. Balanced Priorities

Resources shall be effectively allocated to address safety, programmatic, and operational considerations. Protecting the public, the workers, and the environment shall be a priority whenever activities are planned and performed. Balancing priorities is particularly important when defining work, assessing hazards, identifying controls, and in designing feedback and continuous improvement programs. Once a decision is made that a work item is to be conducted, all the identified controls are necessary and thus the decision to do the work is a prioritization decision to apply the necessary resources as defined by the agreed-upon controls.

12. Adequate Implementation and Integration Mechanisms.

Implementation and integration mechanisms should be identified. Integration should be evident throughout all organizational functions at all organizational levels from the site to the individual activity (horizontal and vertical integration). ISMS specific programmatic requirements should include assessment, continuous improvement, and annual updates.

13. DOE Organization and Processes support ISM.

The DOE Approval Authority should have a set of processes which interface efficiently and effectively with the contractor organization. DOE processes must include elements of the other core requirements as they apply to the responsibilities of DOE to translate missions into work, set expectations, and allocate resources as well as to approve, control, and authorize operations.

B. ISMSV Core Requirements.

1. Define the Scope of Work

A process has been established to clearly define facility missions. These missions have been translated into discrete tasks or processes that facility personnel understand and can adequately control. Specific tasks, operations, or work items are identified and prioritized.

2. Analyze the Hazards

The full spectrum of hazards associated with work or a task have been identified, analyzed, and categorized. Those personnel responsible for the analysis of environment, safety, and health impacts have been effectively integrated into the contractor's organization and work closely with those individuals who are responsible for the analysis of the processes.

3. Develop and Implement Hazard Controls

A process has been established that identifies appropriate safety requirements and readily adapts them to the diverse activities and hazards present within a facility. The set of requirements must be comprehensive and ensure adequate protection of the public, worker, and the environment.

The contractor has established adequate mechanisms for implementing the set of safety requirements agreed upon with DOE. These mechanisms ensure that consideration is given to the protection of the public, the worker, and the environment and that the appropriate controls merge together at the workplace to prevent or mitigate the hazards that have been identified.

4. Authorize and Perform Work within Controls

A process has been established for the effective planning of hazardous work. Personnel who are assigned responsibility for completing this work are instructed on the hazards and the engineered and

administrative controls that will be used to control the hazards. Personnel performing the work are provided with a single set of instructions that effectively integrate the necessary controls. Appropriate mechanisms are in place to authorize the performance of the work, including a process that confirms the readiness to perform the work before it is started.

5. Feedback and Continuous Improvement

A process has been established to measure performance and identify opportunities for improvement. This includes identifying opportunities for improvement even in those cases where the current level of performance has been demonstrated to meet current expectations or safety goals. Recommended improvements are appropriately evaluated and are implemented when proven to be cost effective. Safety performance is measured by line management and is periodically validated by independent parties.

ROCKY FLATS CLEANUP AGREEMENT STAKEHOLDER FOCUS GROUP

Community Process Discussion

February 28, 2001

DRAFT Revision 0

The community members of the Rocky Flats Cleanup Agreement (RFCA) Stakeholder Focus Group dedicated a portion of their February 28, 2001 meeting to a discussion of the Focus Group process. Following is a facilitator's summary of that discussion.

FOCUS GROUP GOAL, OBJECTIVES, AND INTERESTS

The community members identified the following framework for the Focus Group which is shared in common.

Community Goal for the Focus Group: To achieve the best possible cleanup of Rocky Flats

Community Objectives for the Focus Group:

- Get complete information about cleanup-related studies and decisions throughout the cleanup process
- Influence the agencies in their cleanup decisions
- Get clear understanding of agency decisions
 - Get clear understanding of the technical basis for decisions
 - Get clear understanding of the policy implications of decisions
 - Know when a decision has been made – as soon as possible in the decision-making process

Community Interests for the Focus Group:

- Collaborate with agencies on cleanup analyses and decisions
- Understand the objectives for each discussion
- Get closure on each issue addressed
- Collaborate with agencies on setting Focus Group agendas

ADMIN RECORD

**RFCA Stakeholder Focus Group
Process Discussion Summary – February 28, 2001**

FOCUS GROUP PROCESS

The community members identified the following revisions which should be made to the Focus Group process:

- The agencies and community should work together to set the path forward for the Focus Group.
- The Focus Group should establish a steering committee to set the agenda for each meeting. The steering committee should include representatives from the RFCAB, the RFCLOG, and the agencies.
- Agendas should be structured so that there is sufficient time for a full dialog on each issue addressed.
- The agencies should provide background information on each issue to be discussed in the packet prior to the meeting.
- There should be a round robin at the end of each meeting to get a key thought from each participant (a decision to pass will be honored).
- A holistic “check-in” should be part of every meeting – where we are in the big picture and where we are going next.
- The March 14, 2001 meeting should be dedicated to setting the path forward for the Focus Group and to establishing a process for reaching closure on each issue addressed by the group. The path forward should be based on a current, comprehensive outline of upcoming cleanup decisions and issues, brought to the Focus Group by the agencies.

FOCUS GROUP GROUND RULES

The facilitator will add the following ground rules to the Focus Group process, based on the community discussion:

- Focus on the issue, not the person. Participants should demonstrate respect for each other as persons even when they disagree on issues. Participants should not reprimand or criticize each other in person or in writing.

**RFCA Stakeholder Focus Group
Process Discussion Summary – February 28, 2001**

- No surprises! Controversial statements or issues should be shared with all of the participants prior to the Focus Group meeting. Any potentially controversial written comments should be included in the packet prior to the Focus Group meeting.

**RFCA Stakeholder Focus Group
Attachment B**

Title: Meeting Minutes for March 14, 2001 Focus
Group Meeting

Date: March 14, 2001

Author: C. Reed Hodgkin
AlphaTRAC, Inc.

Phone Number: (303) 428-5670

Email Address: cbennett@alphatrac.com



RFCA Stakeholder Focus Group Attachment C

Title: RSALs Review Schedule

Date: February 22, 2001

Author: Sandra MacLeod
U.S. Department of Energy

Phone Number: (303) 966-3367

Email Address: sandra.macleod@rf.doe.gov

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RFCA-006460

Draft RSAL Public Process Proposed Schedule (2/21/01)

Tasks	1 st Draft Distributed	Focus Group Mtg.	2 nd Draft	Focus Group Mtg.	Peer Review & FG Comments Due	Final Draft to Principals
Task 1 [†] (Regulatory Analysis)	10/27/00	11/18/00 & 11/19/00	1/19/01	2/14/01 [†]	3/8/01	3/22/01
Task 2 (Model Eval.)	11/20/00	12/13/00	3/02/01	3/14/01 [†]	3/28/01	5/30/01 (see Note 3)
Task 3 (Parameter Eval.)	4/17/01	1/31/01	(see Note 1)	4/25/01 [†]	5/09/01 [†]	5/30/01
Task 4 (New Science)	4/3/01	1/17/01	(see Note 1)	4/11/01	4/25/01 [†] (see Note 2)	5/16/01
Task 5 (Cleanup levels @ other sites)	10/25/00	11/8/00	12/1/00	1/3/01		5/30/01 (w/entire report)

Focus Group Meetings (Proposed):

10/25/00:	11/8/00:	11/29/00:	12/13/00:	1/3/01:
> Review and discuss RSAL process	> Regulatory Analysis (Rev. 1 of report)	> Reg. Analysis (Q & A) > RFCA Peer Review	> Reg. Analysis 3 > Model Evaluation 1 (Rev. 1 of report)	> Industrial Area SAP > New Science 1
1/17/01:	1/31/01:	2/14/01:	2/28/01:	3/14/01:
> Scenarios Intro > New Science > Workshop discussion > Wind Tunnel info	> Detailed scenario discussion > RSAL Workshop design team report > Peer Review questions on Task 1	> Regulatory analysis > Update of air model (Radian) > Workshop	> ALARA > Process	> Task 1-Peer Review & Focus Group comments > Model Evaluation
3/28/01:	4/11/01:	4/25/01:	5/9/01:	5/23/01:
> Model Evaluation > Sensitivity Analysis Approach	> New Science > Task 2-Peer Review & Focus Group comments > ALARA	> Parameter Eval. 1 (Rev. 1 of Task 3 report)	> Parameter Eval. 2 > Task 4-Focus Group comments	> Draft Report > Task 3-Peer Review & Focus Group comments

Formal Public Comment Period For RSAL Report:

6/14/01:	8/13/01:	9/14/01:
> Public Comment Begins	> Public Comment Ends	> Final Report Released

Note 1: Second draft is not currently planned. Peer Review and Focus Group comments will be incorporated into the first draft (note that Peer Review of Task 4 is not currently planned, so only Focus Group comments will be incorporated).

Note 2: Focus Group comments only because Peer Review is not currently planned for Task 4.

Note 3: Final draft of Task 2 is scheduled for after the model workshops (it will be included with the final draft of the entire report).

ADMIN RECORD



February 21, 2001

Dear Stakeholder:

The Rocky Flats Cleanup Agreement (RFCA) Stakeholder Focus Group will meet at the **Arvada City Hall, 8101 Ralston Road, Anne Campbell Room**, on February 28, 2001 from 3:30 to 6:30 p.m.

The agenda for the February 28, 2001 meeting is enclosed (Attachment A). We will discuss the following topics:

- ALARA
- RFCA Stakeholder Focus Group meeting process

The meeting minutes for the February 14, 2001 meeting are enclosed as Attachment B.

Please think about how we can make this Focus Group [Reed, I'm thinking here of words like "useful tool, good experience," etc.]

Also enclosed is Attachment C, the latest agency schedule for the RSALs review.

If you need additional information to prepare you for the Focus Group discussion on February 28, 2001, please contact Christine Bennett of AlphaTRAC, Inc. at 303 428-5670 (cbennett@alphatrac.com). Christine will help to find the appropriate resource for you.

You may call either Christine or me if you have any questions, comments, or suggestions concerning the RFCA Stakeholder Focus Group or the upcoming meeting.

Sincerely,

C. Reed Hodgin, CCM
Facilitator / Process Manager

ADMIN RECORD



TO: RFCA Focus Group Participants
FROM: Gerald L. DePoorter, Ph.D.
Emeritus Professor of Metallurgical and Materials Engineering
Colorado School of Mines
SUBJECT: Frustration with Focus Group Progress

The RFCA Focus Group was set up to provide a forum for in depth discussions of the issues related to environmental remediation at the RFETS including the selection of a RSAL by DOE and the regulators. However, there are certain factors in this selection process that are not open for discussion because they cannot be changed whether the group likes it or not. In my view, our discussions are being diverted down unproductive channels toward issues that the group can have no influence over. Other agendas not related to the determination of a RSAL are also being brought into the discussions and I think it would be valuable to point these out.

First, the regulatory basis for determining a RSAL is clearly stated in the TASK 1 Draft Report. A dose of <25 mrem. and an excess cancer risk to an individual of 10^{-6} to 10^{-4} based on the reasonably anticipated land user. These are numbers that are not negotiable. It makes little sense to spend time in this group arguing about or trying to change these numbers. The RSAL will be determined based on the exposure of and risk to a Wildlife Refuge Worker, at this time, the most reasonably anticipated land user. Even though Plutonium has a half-life of 24,000 years, the RSAL will be determined based on the anticipated land use now and this cannot be changed by discussion in the Focus Group.

Second, the RFCA Focus Group is not a forum for discussing the morality of Nuclear Weapons. Rocky Flats was an essential part of the Weapons Complex and is now being decontaminated and decommissioned in addition to the environmental remediation that has been, and will be done. The RSAL is related to environmental remediation, and that is the issue we need to remain focused on.

Third, the DOE and the regulators are now using RESRAD 6.0 to calculate the RSAL. The Task 2 Draft Report clearly states that RESRAD 6.0 is the computer code chosen for the RSAL calculations. The RAC modified RESRAD 5.82 is compared with RESRAD 6.0 in this same report. A brief discussion comparing and contrasting RESRAD 5.82, RAC modified RESRAD 5.82, and RESRAD 6.0 is appropriate but expending a large amount of time comparing these three models will not be productive. Our focus should be on how RESRAD 6.0 will be used to calculate the RSAL for the RFETS.

It was made clear when the RFCA Focus Group was set up that participation must be active and ongoing. That is, interested parties should attend as many meetings as possible and become informed or catch up on missed material between meetings. It was clearly stated that people who got behind the pace of the group would have to be responsible for staying fully informed. It is not the group's responsibility to catch people up on material they have missed.



One of the ground rules for the group was respect for each other and each other's organizations. The amount of DOE "bashing" that is taking place does not contribute to productive discussions. Irrespective of ones previous interactions with the DOE, they have invited us to the table and are listening to our input. We need to make good use of this opportunity to influence the decisions we can about the site clean up. Just because an individual has worked at one time for the DOE, is currently working for the DOE, or is in the DOE system does not render them open to disrespectful communications.

All of the above factors have come into play in the discussions about the RESRAD workshops and I would like to site some of these specifically.

The catalyst for considering having workshops on RESRAD 6.0 was a recommendation from the Rocky Flats Citizens Advisory Board (RFCAB). The RFCAB recommended two workshops, one on RESRAD 6.0 and one on the parameters to be used in the calculations. I prepared a workshop proposal for the January 17 Focus Group Meeting and based the proposal on the RFCAB recommendation and discussions that were held at the January 3 Focus Group Meeting. This proposal was discussed extensively at the January 17 meeting and a committee was formed to work more on the workshop proposal. The committee was open to any Focus Group Member that wanted to participate. The committee met on January 19, considered the input from the Focus Group, and came up with the Workshop Proposal that was presented at the January 31 meeting. The committee felt that they had captured the intent of the Focus Group discussion at the January 17 meeting in the new proposal.

At the January 31 meeting, Focus Group Members who neither participated in the Workshop committee nor were at the January 17 meeting took great issue with the proposal that was presented and for all intents and purposes sent the workshop planning process back to the drawing board. Objections were made to both the assumptions and objectives that had been agreed upon at a previous meeting. At this point I realized that I was no longer willing to participate in the planning for the RESRAD workshops and said so at the meeting.

Revisiting issues over which the Focus Group has no control and those which have already been agreed upon is a waste of my time. The Focus Group needs to work on obtaining the best calculation of a RSAL using RESRAD 6.0. As has been pointed out many times, the RSAL is not the final clean up level. The Focus Group will have more input when the individual remediation tasks are planned.

As mentioned above, the already established regulatory basis allows DOE and the regulators little leeway in the choice of the scenario to be used for calculating the RSAL. Arguing and wringing our hands over their choice does not accomplish anything. Where the group can have an impact is in fleshing out the details of the chosen scenario.

In my view, the Focus Group needs to be looking "globally" as well as "locally" as we discuss issues. The handout entitled "Relationship Between RSALs, Water Quality, Cleanup, and Stewardship" is a good guide to a more "global" thinking process.

That handout clearly shows that the RSAL triggers the cleanup action, but that Surface Water Quality protection must be considered in the cleanup of each Individual Hazardous Substance Site (IHSS). The Focus Group needs to clearly determine where their actions can effect decisions and direct their efforts in that direction. We need to understand and accept the issues over which we can have no impact and stop wasting time and energy in these arenas. We need to understand the relationships between "local" and "global" issues and not lose site of our goals for the cleanup of the RFETS. We must realize that the cleanup goals are tempered by regulatory and budget factors that the RFCA Focus Group was never intended to address.

At its inception I had high hopes for the RFCA Focus Group. Instead of being a "focused" group that could have a substantial impact on the DOE process it is turning into a "fractioned" group where individual political agendas are being emphasized over working together to have a significant impact on the remediation process. Decisions will be made by DOE and the Regulators, and the RFCA Focus Group will still be back at square one due to the afore mentioned factors. I have been, and still am, personally committed to the safest and "cleanest" cleanup of the RFETS that can be achieved under the current Regulatory and budget environments.

RFCA Stakeholder Focus Group

Issue

June 2001 will mark the first-year anniversary of the RFCA Stakeholder Focus Group. While the group has discussed several Environmental Restoration (ER) subjects and their associated issues at length over the past 9 months, other important ER closure projects have yet to be introduced. These projects include decision documents currently in the early planning stages or in actual development, on-going special studies and reports that bear directly on Site policy and future decisions, and near-term remedial actions. The RFCA Stakeholder Focus Group was intended as the primary forum for discussion of these projects and some subjects appeared on the original syllabus.

Purpose and Objectives

The purpose of the discussions is to inform the focus group of the ER projects planned for Site closure. Objectives are as follows:

- Develop a clear understanding of the Site closure strategy;
- Describe the ER projects and how they fit into the closure strategy; and
- Obtain input from the focus group on the projects and strategy.

Approach

The attached draft ER Stakeholder Participation Schedule describes relevant projects and the suggested frequency of discussion. The overall approach is to provide a project overview at the first meeting with later follow-up discussions as the project progresses toward completion. Discussions will be technically focused with a presentation by technical staff followed by a question and answer period. Total discussion time will be approximately two hours. The question and answer period may generate issues that merit follow-up discussion prior to the next scheduled meeting on the same project. These discussions will be accommodated to the extent that they do not delay scheduled dates for other topics. Some of the topics to be discussed will include decision documents, studies, reports and plans, and fieldwork. Some of the topics include: 903 Pad Interim Measures/Interim Remedial Action, Present Landfill decision document, Original Landfill decision document, Solar Ponds Decision Document, Industrial Area Plume design, and the Buffer Zone Sampling and Analysis Plan. Also status information updates on the Land Configuration Design Basis, groundwater plumes, Annual Historical Release Report Update, Building 771 Under Building Contamination Characterization, and PU&D Yard plume treatability study.

ADMIN RECORD



Key RSAL Working Assumptions

Task 1

- RSAL will be based on future user, most likely a wildlife refuge worker.
- The land use scenario associated with institutional control failure will be rural resident
- RSALs will be calculated for a range of land uses, including resident rancher
- RSALs will be calculated to a 25 mrem dose and to risk levels associated with 10×10^4 , 10×10^5 and 10×10^6 .
- The agencies are committed to developing an ALARA process that will guide cleanup decisions on each IHSS remediation. The ALARA process will demonstrate the impacts, costs and consequences of additional increments of cleanup and be a tool to help the agencies and the community discuss appropriate cleanup levels for each remediation.

Task 2

- RESRAD 6.0 will be the computer model used for RSAL calculations.

ADMIN RECORD



RESRAD Air Calculation Comparison

February 2001

4/28

ADMIN RECORD

SW-A-006475

Scope of Review

- Determine how air calculations are performed in 3 versions of RESRAD:
 - Version 5.70 and earlier ("old" RESRAD)
 - Version 5.75 and later ("new" RESRAD)
 - RESRAD as modified/used by Risk Assessment Corporation (RAC) in independent derivation of RSALs (RAC RESRAD)

Scope of Review, con't

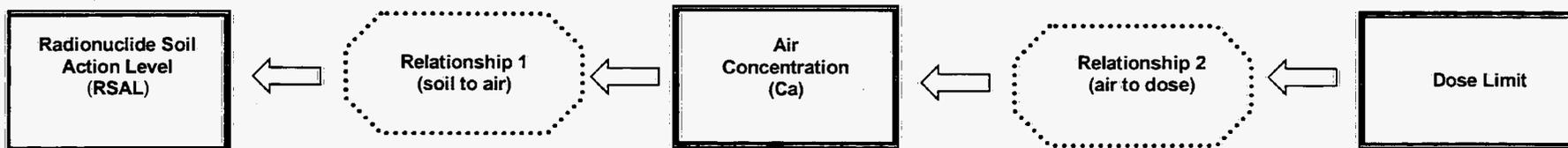
- Compare results of air calculations for the 3 versions
- Qualitatively compare effect of different air calculations and other factors in RSAL determination

RESRAD Overview

Step 1



Step 2



RESRAD Air Calculation

$$Ca = Cs \times ML \times AF$$

where:

Ca is the concentration of radioactivity in air
(pCi/m³)

Cs is the concentration of radioactivity in soil
(pCi/g)

ML is the mass loading of dust in the air (g/m³)

AF is the area factor (dimensionless)

RESRAD Air Calculation, con't

- Area factor (AF) adjusts the mass loading in air to account for the fraction that originates from the contaminated area
- Relationship $1 = Ca/Cs = ML \times AF$

Old RESRAD (5.70 and before)

- $Ca = Cs \times ML \times AF$ (basic equation)
- Area factor (AF) based on **size of contaminated area**
- Cs, ML, and size of contaminated area are input by user (or defaults used)
- Ca is calculated for the air immediately above the contaminated area (i.e., Ca is maximized)
- Area factor based on box model

Old RESRAD, con't

$$AF = A^{1/2} / (A^{1/2} + DL)$$

where:

AF is area factor (fraction of dust in air that originates from contaminated area)

A is size of contaminated area (m²)

A^{1/2} is length of side of contaminated area

DL is a dilution length, set to 3 m (default)

New RESRAD (5.75 and later)

- $Ca = Cs \times ML \times AF$ (basic equation)
- Only difference from old RESRAD is that formula for area factor is different:

$$AF = a / (1 + b(A^{1/2})^c)$$

where:

a, b, and c are coefficients for curve fitted to simulation modeling results; they vary with wind speed

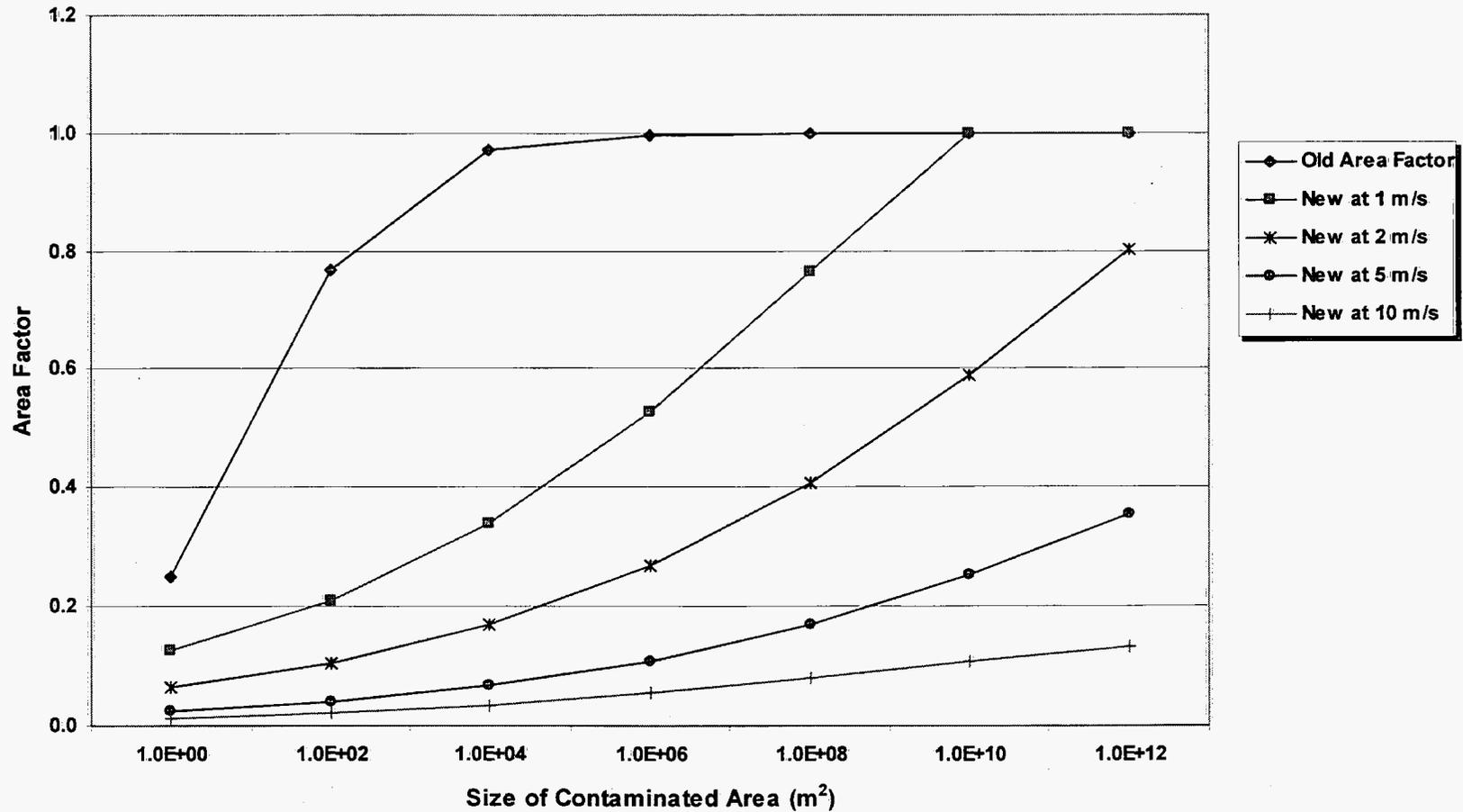
New RESRAD, con't

- AF based on **size of contaminated area** and **wind speed** (old RESRAD based on size alone)
- Cs, ML, size of contaminated area, and wind speed input by user (or defaults used)
- Ca is calculated for the “downwind” boundary of the contaminated area (i.e., Ca is maximized)

New RESRAD, con't

- To derive area factor formula, Gaussian plume simulations compared air concentrations of pollutants from various size areas, under various wind speeds, to concentrations from an infinitely large area
- Results fitted to curves and coefficients that define the curves are built into RESRAD

OLD vs. New RESRAD Area Factors



RAC RESRAD

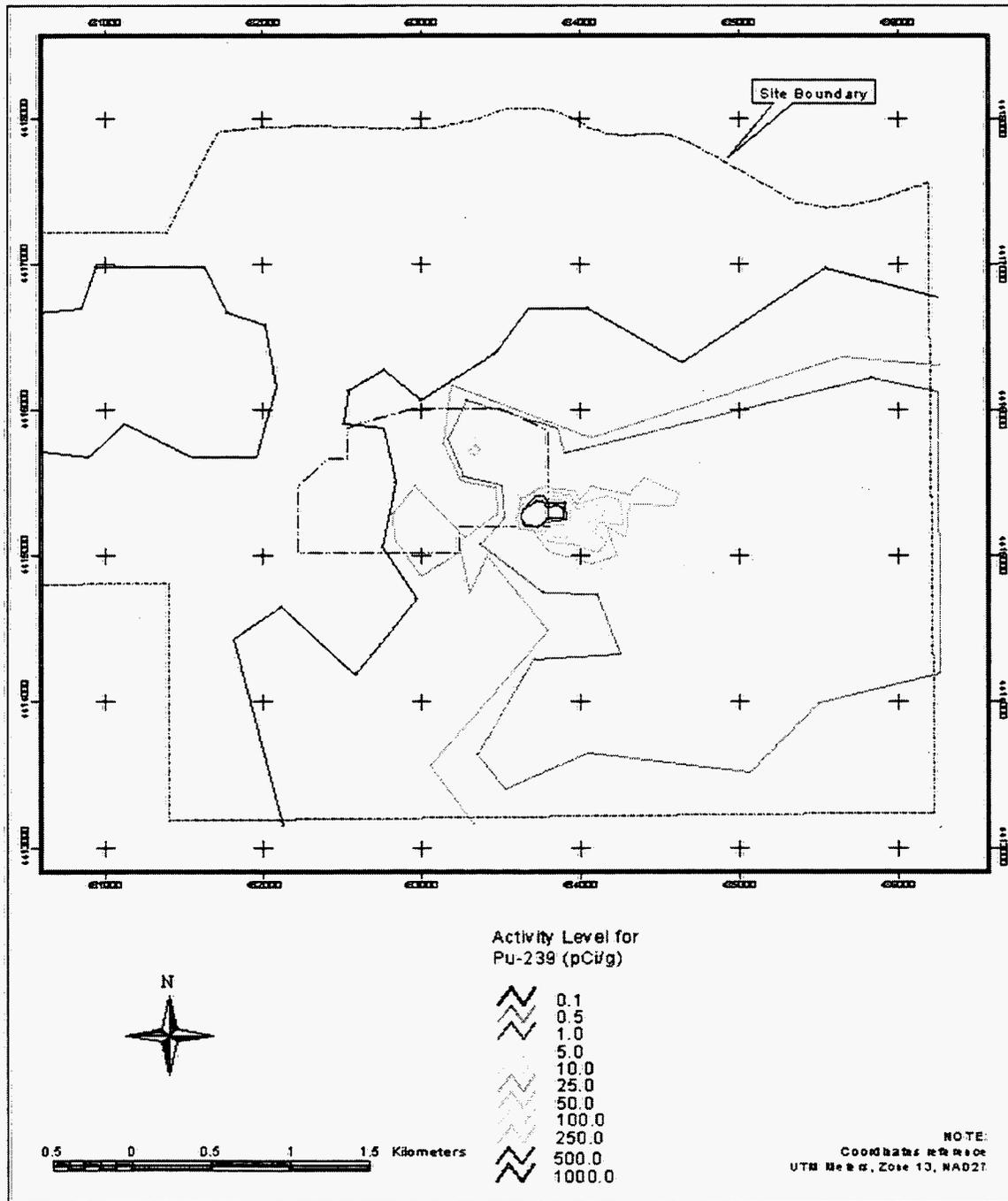
- RAC performed air calculation outside of RESRAD, then used new RESRAD to compute intakes and doses
- Ca and Cs were computed outside of RESRAD using:
 - Existing soil and air radionuclide concentration data
 - Combination of resuspension model and dispersion model to relate soil concentrations to air concentrations

RAC RESRAD, con't

- Resuspension/dispersion model:
Coefficients for resuspension portion unknown; coefficients were adjusted to fit model results to measured air concentrations
- Manipulated RESRAD into duplicating the externally calculated C_a by substituting different quantity for user-input ML value

RAC Use of Air Calculation

- RAC's model allowed calculation of Ca at many locations
 - However, to derive RSALs, input **maximum** Ca/Cs pair (i.e., maximized Ca/Cs instead of Ca)
 - Maximum Ca/Cs ratio represents eastern fenceline, where air concentrations result from upwind contamination (903 Pad area) but actual soil concentrations of radioactivity are low



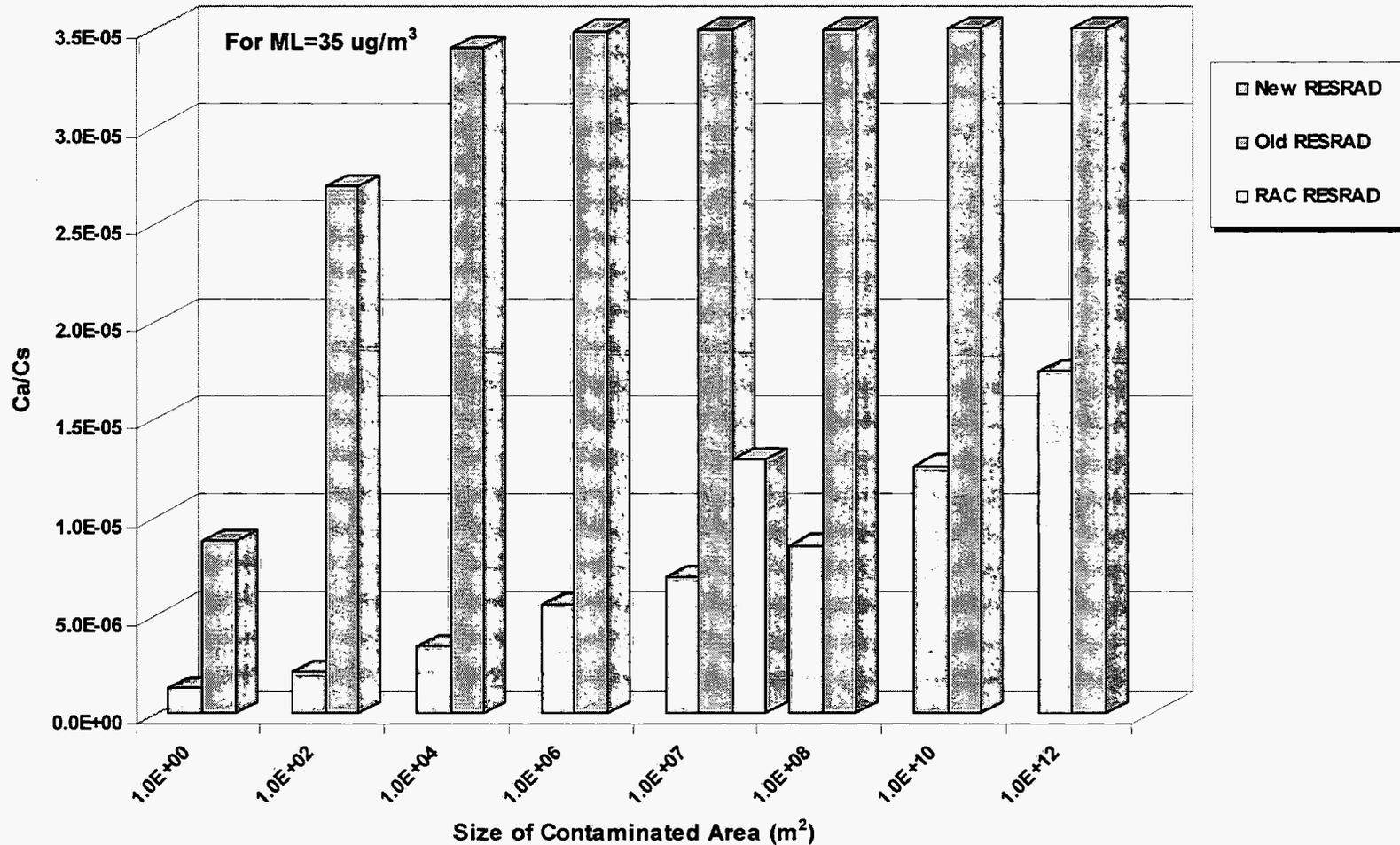
RAC Use of Air Calculation, con't

- RSALs based on series of Monte Carlo simulations vs. deterministic RSALs calculated by RESRAD
 - RSAL represents a point on a probability curve rather than the soil concentration that would result in the limiting dose

RAC Use of Air Calculation, con't

- Fire included probabilistically and assumed to increase annual resuspension (and therefore dose) by up to 200 times
 - RSALs set based on 10% probability of exceeding dose limit; at that level, fire simulations drive RSAL calculation

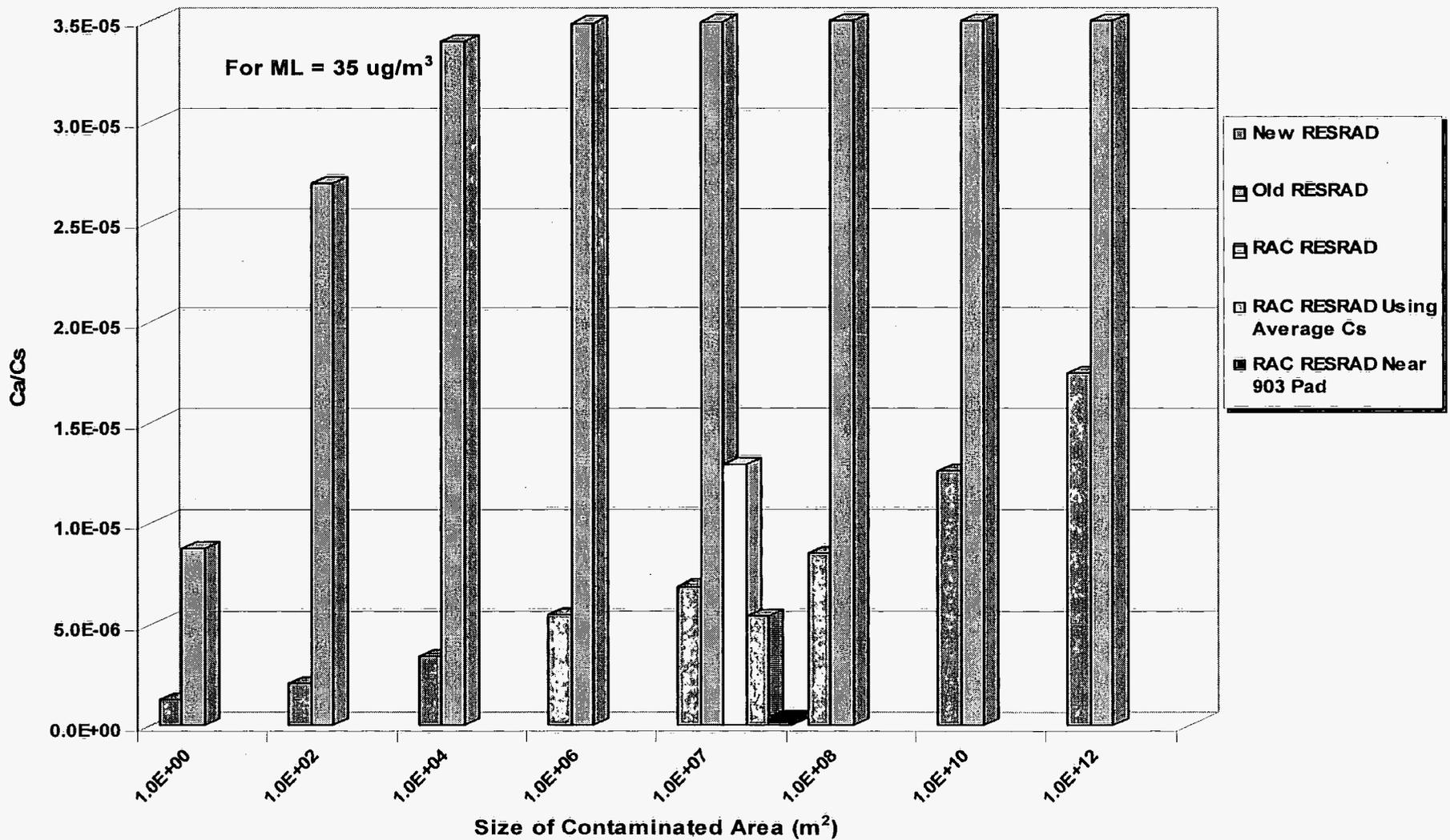
Comparison of Air Calculations



Comparison of Air Calculations, con't

- Ca/Cs ratio (Relationship 1) compared
- Old RESRAD predicts highest air concentration for a given amount of soil contamination; resulting RSAL would be **lowest (most restrictive)**
- RAC Ca/Cs ratio in between; therefore, RSAL would be in between old and new RESRAD

Comparison of Air Calculations, con't



Comparison of Air Calculations, con't

- RAC Ca/Cs ratio recalculated:
 - 1) Based on upwind average Cs
 - 2) For point near 903 Pad (Ca maximized, instead of Ca/Cs ratio)
- Both revisions show reduced Ca/Cs (lower air concentration for a given amount of soil contamination); therefore, RSALs would be **higher (less restrictive)** than either old or new RESRAD

Comparison of Air Calculations, con't

- If a worst case fire is included, Ca/Cs ratio is greatly **increased**
- Resulting RSAL (calculated deterministically) would be greatly **decreased (more restrictive)**

Conclusions

- All other things being equal, old RESRAD (5.70 and before) would result in more restrictive RSALs than either new RESRAD (5.75 and later) or RAC RESRAD
- RAC RESRAD produces air pathway calculations in range of new RESRAD; however, RSALs derived by RAC are highly sensitive to location, contaminated area size, and fire

Addendum: RAC RESRAD Calculation

Note: ***Bold, italic*** notation is used for quantities calculated by RAC outside of RESRAD

- $Ca = Cs \times ML \times AF$ (basic RESRAD air calculation)
- Therefore, $Ca/Cs = ML \times AF$
- RAC calculated ***Ca*** and ***Cs*** outside of RESRAD using different model

Addendum: RAC RESRAD Calculation, con't

- RAC also calculated AFr = area factor that would be calculated by RESRAD for given area and wind speed
- $ML \times AF / AFr$ was input to RESRAD in place of ML (where $ML \times AF = Ca / Cs$ calculated externally)

Addendum: RAC RESRAD Calculation, con't

RESRAD calculates:

- $Ca = Cs \times (ML \times AF / AFr) \times AF$ where
 $AFr = AF$
- $Ca = Cs \times (ML \times AF)$ (AF, AFr cancel)
- $Ca = Cs \times (Ca / Cs)$
- $Ca = Ca$ for the Cs shown above