



April 26, 2002

Dear Stakeholder:

This correspondence transmits copies of handouts and presentations from the April 17, 2002 RFCA Stakeholder Focus Group meeting (Attachment A), including:

- RESRAD and Risk Recalculations, and
- Uranium Surface RSAL Calculation and Draft Modeling Results.

Attachment B is the RSALs Working Group notes for the meeting on April 25, 2002.

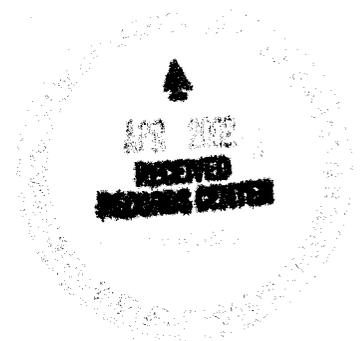
Attachment C is the October 17, 2001 RFCA Stakeholder Focus Group meeting minutes.

Attachment D is the November 14, 2001 RFCA Stakeholder Focus Group meeting minutes.

You may call either Christine or me if you have any questions, comments, or suggestions concerning the enclosed documents.

Sincerely,

C. Reed Hodgkin, CCM  
Facilitator / Process Manager



ALPHA TRAC

SW-A-004502

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**RFCA Stakeholder Focus Group  
Attachment A**

Title: April 17, 2002 RFCA Focus Group Meeting  
Presentations and Handouts, including:

- RESRAD and Risk Recalculations, and
- Uranium Surface RSAL Calculation and Draft Modeling Results.

Date: April 26, 2002

Phone Number: (303) 428-5670

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Recalculated RSALs for  
Plutonium and Americium



James Benetti  
USEPA  
Las Vegas Nevada

Differences in Parameters

- Adult soil ingestion: uniform distribution (1-130 mg/day) vs point estimate (100 mg/day)
- Soil ingestion apportioned differently for Open Space User and Office Worker
- Full in-growth Americium (18.2%) vs average measured value (15.3%)

Results: New/Previous,  
Sum of Ratios - pCi/g

Scenario	Pu RSAL	Am RSAL
Wildlife Refuge Worker	780/862	142/132
Rural Resident (Adult)	232/209	42/32
Rural Resident (Child)	251/244	46/37

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Results: New/Previous,  
Sum of Ratios - pCi/g

Scenario	Pu RSAL	Am RSAL
Open Space (Adult)	3617/11797	658/1801
Open Space (Child)	1205/4842	219/739
Office Worker	1598/2289	290/350

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## Summary

- Americium RSALs go up relative to Pu because of higher equilibrium ratio.
- Decrease in RSALs for Open Space User and Office Worker consistent with risk approach used previously.
- Changes in Refuge Worker, Rural Resident values not considered significant.

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## End of Topic

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RESRAD Uranium RSAL  
Results for Rocky Flats



James Benetti  
Health Physicist  
Las Vegas, Nevada

Aspects of the Uranium Problem

- Small "Hot Spots" of uncertain area
- Primarily subsurface
- Site has worked with both Depleted (DU) and Enriched (EU) forms
- Possible wide range of ratios of 3 isotopes- U 238, U 235, U 234.
- Toxicity to human kidney must also be considered.

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## General Approach

- Model Wildlife Refuge Worker & Rural Resident (Adult & Child) Scenarios.
- Use same parameter values & distributions as for Plutonium RSALS if possible.
- Investigate selected additional parameters for sensitivity. (Area and depth, etc.)
- Address uncertainty conservatively.

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## Parameter Sensitivity Investigation

- Area of contamination - very sensitive for small hot spots.
- Depth of contamination - sensitive up to about 40 centimeters for uranium
- Plant Root Uptake Fraction for uranium: a wide range of variability observed.

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## Pathway Sensitivity

- Plant ingestion - dominant for U234
- External exposure - dominant for U238 & U235
- Soil ingestion - modest to slight importance.
- Inhalation - always less than 1% of dose.

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## Addressing Uncertainty in Area & Depth of Contamination

- Model a hypothetical large area (5 acres).
- Model hypothetical surface contamination.
- Select 50 centimeters as hypothetical depth of contamination.

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## Addressing Uncertainty in Isotopic Ratios for Uranium

- Compute RSAL for each isotope (U238, U235, U234)
- Compute Sum-of-Ratios RSALs for both DU and EU (Bounding cases)
- Select the most restrictive RSAL as a single criterion.
- Express as total uranium in mass units (micrograms per gram of soil).

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## Addressing Toxicity

- For sum-of-ratios RSALs for DU & EU:
  - Find percentage of dose due to ingestion (plant ingestion plus soil ingestion).
  - Back calculate to annual intake, average daily intake.
  - Compare with the Reference Dose for Uranium. (RfD = 3.0  $\mu\text{g}/\text{kg}/\text{day}$ )
  - Reduce SAL so RfD not exceeded.

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Depleted Uranium  
 1 picoCurie = 2.5 micrograms

Isotope	% by Mass	% Activity
U-238	99.75	70
U-235	0.25	1
U-234	0.0005	79

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“20%” Enriched Uranium  
 1 picoCurie = 0.111 micrograms

Isotope	% by Mass	%Activity
U-238	79.95	4
U-235	20	6
U-234	0.05	90

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## Dose Coefficients

- Taken From ICRP 72
- Applicable to Members of the Public
- Age Specific - Adult and One-Year-Old Child
- Only one choice for Ingestion Coefficient (Conservative)
- Used Default Type M for Inhalation

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## Plant Uptake Fraction

- Represents fraction of U in soil taken up through plant roots.
- Wide variability observed in studies
- Influenced by many factors
- Used a broad distribution in RESRAD
- Modeled more conservatively than RESRAD default

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Results (micrograms/gram)  
Before Toxicity Adjustments

Scenario	DU RSAL	EU RSAL
Rural Resident (Adult)	619	31
Rural Resident (Child)	692	35
Wildlife Refuge Worker	3268	225

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Results (micrograms/gram)  
Adjusted for Toxicity

Scenario	DU SAL	EU SAL
Rural Resident (Adult)	225	31
Rural Resident (Child)	124	35
Wildlife Refuge Worker	3163	225

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## Summary

- Most restrictive criterion for Rural Resident Scenario is 31 micrograms/gram.
- Most restrictive criterion for Wildlife Refuge Worker is 225 micrograms/gram
- Both criteria are radiologically based on 25 millirem annual dose for 20% enriched U.
- Based on many conservative assumptions.

**RFCA Stakeholder Focus Group  
Attachment B**

Title: RSALs Working Group Notes for April 25, 2002  
Date: April 26, 2002  
Phone Number: (303) 428-5670  
Email Address: cbennett@alphatrac.com

**NOTES FROM RSALs WORKING GROUP MEETING ON 4/25/02**

**ITEMS COVERED ON 4/25:**

1. Discussed editing and finalizing of the Task 3 report.

**ACTIONS**

<b>Action Item</b>	<b>Who</b>	<b>When</b>	<b>Notes</b>
Provide Task 3 report changes to Bob, Susan and Jim for interim review.	Diane N.	early in week of 4/29	
Add paragraph to Section 4 of Task 3 report from Phil s write-up.	Susan Griffin	5/3/02	
Make electronic changes to the Task 3 report and e-mail to Mark Aguilar & Sandi MacLeod after ALL changes are made.	Each working group member	5/3/02 at the latest (sooner if possible)	

**DECISIONS**

1. All edits to the Task 3 report will be complete by May 3. All edits will be merged into one document by May 9. During the May 9 working group meeting, the group will review and finalize the edits (this meeting will probably last longer than the usual 3 hours).
2. No working group meeting will be held on May 2.

**NEXT MEETING: THURSDAY, 5/9/02, 8:30 a.m., at CDPHE, Snow Room, Building A**

**Agenda Items:**

1. Review and finalize the edits to the Task 3 report.
2. Go through actions.

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## RFCA Stakeholder Focus Group Attachment C

Title: October 17, 2001 RFCA Stakeholder Focus Group  
Meeting Minutes

Date: April 26, 2002

Phone Number: (303) 428-5670

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

## **INTRODUCTION & ADMINISTRATIVE**

A participants list for the October 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 Focus Group and the meeting rules. Introductions were made.

## **AGENDA**

Reed reviewed the agenda:

- Task 3 Peer Review and Wind Tunnel Technical Review Update;
- Task 3 Report - Briefing and Discussion;
- Final results form the Radionuclide Soil Action Level (RSAL) Modeling - Resident Rancher Scenario - RESRAD results, key parameters, and comparison to historical results;
- Task 3 Peer Review - Framing the Questions for the Reviewers.

### **Technical Review Update: Wind Tunnel-Based Characterization of Wind Resuspension for Development of RSALs at the Rocky Flats Environmental Technology Site (RFETS)**

Reed provided background information regarding the development of the wind tunnel technical review. The scope was defined as involving primary and supplementary questions posed to national experts in the field. AlphaTRAC, Inc. is working on firming up the contractual aspects of the technical review and has gathered all materials to support the technical review.

The approach involves national experts reviewing the study and responding to primary questions and supplementary questions related to the wind tunnel technology and results.

The objectives of the technical review include:

1. To evaluate the appropriateness of the wind tunnel technology used in studies at RFETS for developing wind resuspension values related to soil particles. These values are proposed in establishing RSALs at RFETS for the purpose of determining cleanup levels.

2. To evaluate if the wind resuspension values are adequate for developing input parameters for use in the dose (RESRAD) and risk (RAGS) models used for establishing RSALs at RFETS.

Reed reviewed the *Wind Tunnel-Based Characterization of Wind Resuspension for Development of Radioactive Soil Action Levels at Rocky Flats* document with the Focus Group.

The two primary questions are stated above; the supplementary questions raised by the Focus Group are listed below. The technical reviewers should, where possible, consider the supplemental questions while conducting their primary evaluations.

1. Has the equipment been thoroughly tested for operations like those for which it is being used as Rocky Flats? Is the review of sufficient quality and thoroughness to evaluate the applicability of the approach to the problem at Rocky Flats? Does the review show that the wind tunnel approach is appropriate and adequate for this purpose?
2. Is the pitot tube methodology employed in the wind tunnel adequate for characterizing the wind profile in the wind tunnel while it is operating?
3. Is the wind tunnel working section long enough so that the desired wind conditions can develop and remain stable for characterizing resuspension?
4. Does the wind tunnel methodology adequately account for the effects of small-scale variations in surface cover and surface roughness, including turbulence variations on a small scale?
5. Is it true that roughness of the surface may act to dam or retard rather than to release surface particles in unidirectional wind flow? If so, how can this equipment accurately account for this reality?
6. Is the sampling period appropriate for wind resuspension at Rocky Flats? Is the supply of suspendable material being depleted well before a test is over? Does this artificially affect the results of the experiments (e.g., fictitiously low average resuspension rate because some sampling was performed when there was no material left to resuspend)?
7. How well does the wind tunnel reproduce actual meteorological conditions expected during high winds at Rocky Flats? Are there any field validation data to demonstrate this?
8. Does the wind tunnel realistically and adequately account for vertical wind velocity and variations in it?

9. High winds at Rocky Flats involve rapid fluctuations in wind speed, wind direction, and turbulence. How important are these effects to resuspension? Does the wind tunnel reproduce these effects adequately for meeting the goals of the project.
10. How effective is the wind tunnel at resuspending particulates of different sizes? Does the wind tunnel have a high efficiency for particles of small, medium, and large size? Here "efficiency" means how well the equipment mimics actual conditions in the external environment.
11. If the effectiveness of the wind tunnel at reproducing resuspension is good at various particle sizes, it is good at different wind speeds? Since particles of different sizes have their own specific thresholds for resuspension and transport, does the equipment detect the thresholds accurately?
12. Is the particulate sampling being performed to appropriately capture the dust that is resuspended during the wind tunnel tests (to include isokineticity and the design of sampling inlets)?
13. Is the recurring process of deposition and resuspension being adequately treated by the wind tunnel? If the process is not fully treated, does this mean that the wind tunnel results will tend to over-predict or under-predict resuspension rates?
14. What method has been used or should be used to verify the sampling efficiency of the wind tunnel?
15. While the wind tunnel results show increases in airborne dust release rates as wind speed increases, intake of air by humans is activity-dependent, not wind-speed dependent. How can this be taken into account in using data from the wind tunnel?
16. Are the increases in air concentrations associated with increasing wind speeds as determined by the wind tunnel realistic and reasonable?

### **Task 3 Report - Briefing and Discussion**

The agencies are proposing new Radionuclide Soil Action Levels (RSALs) for surface soil for plutonium and americium to guide the cleanup at Rocky Flats. These RSALs will replace those levels established in 1996. The RSALs are the activity concentrations of radionuclides; if exceeded, they cause either an evaluation, a remedial action, or a management action. Existing RSALs are under review and new RSALs are being proposed based on many factors, such as new scientific information and the fact that unpromulgated rules regarding site cleanup were never formalized.

Draft Task 3 Report discussed the exposure scenarios that the agencies are using for the calculation of new RSALs, as well as methods of calculation, input parameters, and results. Five exposure scenarios were addressed, which include wildlife refuge worker,

rural resident, open space user, office worker, and resident rancher. The office worker and open-space user were evaluated to provide a comparison to 1996 RSALs.

The primary regulatory basis for the RSALs comes from the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). This regulatory basis established a protective risk range. Further considered by the State of Colorado was the Nuclear Regulatory Commission (NRC) decommissioning rule. This NRC decommissioning rule was found relevant to and appropriate for clean up, so RSALs were further evaluated based on a dose of 25 mrem/year (millirem/year) found in the NRC rule. RESRAD was the model used for dose assessment. Where the 25-mrem/year dose limit exceeds the protective risk range prescribed by the U.S. Environmental Protection Agency (EPA) in CERCLA of one in ten thousand to one in a million cancer incidences ( $10^{-4}$  to  $10^{-6}$ ), the agencies developed RSAL values based on the primary regulatory basis established by CERCLA for risk.

Changes in methodology between the 1996 RSAL values and the current values reflect the use of probabilistic methodologies instead of deterministic methods used in 1996. A discussion of differences between probabilistic and deterministic methodologies can be found in the Draft Task 3 Report. Additionally, new scientific methods have resulted in revised dose conversion and cancer slope factors.

Reed requested that the agencies provide an overview of key results of the Draft Task 3 Report, with a discussion session immediately following the overview.

EPA referred the Focus Group to pages 49, 51, and 53 of the Draft Task 3 Report. These pages discuss the use of cancer slope and dose conversion factors, with results reported on page 53. Table V-1, *Dose and Risk Calculations for Plutonium in Surface Soil Adjusted by Sum-of-Ratio Method (pCi/g)* and Table V-2, *Dose and Risk Calculations for Americium in Surface Soil Adjusted by Sum-of-Ratios Method (pCi/g)* were reviewed. Located on page 50 is the discussion and calculation for dose for each scenario and the formula to derive a sum-of-ratios adjusted action level for plutonium and americium.

Tables V-3, V-4, V-5, and V-6 contain radionuclide data for americium and plutonium for risk based probabilistic or deterministic values for the rural resident, the wildlife refuge worker, the office worker, and the open space user scenarios. The values in these charts consider only one radioisotope and that there is no contribution from the other isotope. EPA further clarified that when a probabilistic approach is used, the 90 to 99<sup>th</sup> percentiles of risk distribution are the recommended maximum exposure range, with the 95<sup>th</sup> percentile as the point for making risk decisions. A deterministic approach or point estimate which is considered protective is the reasonably maximally exposed individual. Since RESRAD calculations have an inverse relationship to risk calculations,

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risk calculations results correspond to the 1<sup>st</sup> to 10<sup>th</sup> percentiles, with the 5<sup>th</sup> percentile as the recommended point for decision-making. Similar to the point estimate approach are the target cancer risk levels of  $10^{-4}$  to  $10^{-6}$ , with a recommended starting point of the 5<sup>th</sup> percentile as the reasonably maximally exposed resident, with exposure over a lifetime.

Page 59 of the Draft Task 3 Report speaks to variability and uncertainty, with discussion of the terms, and a qualitative discussion on page 63 of each parameter used for modeling purposes and estimates of conservatism. Appendix A of the report contains further information about parameters. Appendix C contains information related to the risk runs. Appendix D provides information about parameters specific to RESRAD runs. Appendix E will contain RESRAD output reports, which can also be made available on CD, and Appendix F contains air data specific to Rocky Flats and statewide PM-10 air data. Appendix G will contain the discussion on the RAC report.

A member of the Focus Group commented that the report seems to be well done, but the policy discussion still takes precedence in terms of importance.

Reed requested that any comments on the report should be forwarded to Christine Bennett of AlphaTRAC no later than October 26, 2001. Reed speculated that the peer review of the Draft Task 3 Report would take longer, since comments from the Focus Group have a turn around of longer than one week.

EPA responded to a member of the Focus Group who wanted to know about the incorporation of results from the Wind Tunnel Technical Review by stating that related comments and major concerns would be addressed in the Task 3 Report. The planned process for the Task 3 Report involves the informal review conducted by the Focus Group, the peer review, the wind tunnel review, and then the formal public comment period. It is anticipated that this process will not conclude until early 2002.

Reed added that if the mass loading calculations change significantly based on the wind tunnel review that the report be reissued for review, but until then, all reviewers should assume that the mass loading calculations are final.

A member of the Focus Group requested a meeting with the principals to discuss policy issues prior to the formal public meeting. There existed a concern that the Focus Group policy discussion with the principals would be diluted due to the number of people that would potentially attend the public meeting.

Reed suggested that the Focus Group decide when the Task 3 Report discussion would occur. It was decided that this discussion would be scheduled for November 14, 2001.

## **Final Results From the RSAL Modeling - Resident Rancher Scenario - RESRAD Results, Key Parameters, and Comparison to Historical Results**

The RSAL Working Group wanted to compare computational methods used by the Risk Assessment Corporation (RAC), in its previous analysis, against the methods used by the RSAL Working Group. The RSAL Working Group quickly discovered that the RAC's calculation for air mass loading involved methods that were beyond the ability of the RSAL Working Group to recreate. In response to this issue, the RSAL Working Group attempted to formulate a value for the mass loading parameter that was consistent with RAC's work.

EPA presented data contained in Appendix G of the Draft Task 3 Report. It was noted that due to mass loading calculation differences between RAC results and RESRAD, duplication for that parameter was unachievable. All other parameters were exactly duplicated where possible. All active pathways and all input parameters for this scenario are identical to those found in the RAC Task 3 Report (RAC, 1999) except for substitutions of fixed values for uptake parameters and distribution coefficients, and the use of two fixed values of mass loading taken from a distribution of RAC calculated values. To respond to the mass loading difference, an approximation of distribution of mass loading was determined. Single values for annual average mass loading for inhalation (3,180 and 8,920 micrograms per cubic meter for the 90<sup>th</sup> and 95<sup>th</sup> percentile, respectively) were used. These were derived by using the RAC mass loading subroutine to calculate a distribution of 1000 points, followed by the selection of the 90<sup>th</sup> and 95<sup>th</sup> percentile for this distribution. The results of this approximation served as a benchmark or point of comparison between the RAC results and the RSAL Working Group results.

The Colorado Department of Public Health and Environment (CDPHE) commented on Table G-1, which describes the RSALs (pCi/g) for the resident rancher at the 90<sup>th</sup> percentile value of RAC-calculated mass loading (3180 ug/m<sup>3</sup>). It was noted that the most comparable RSAL Working Group value to the RAC Task 3 Report value was the Plutonium RSAL for an Adult (15 mrem/yr). The RSAL Working Group value was 27 pCi/g and the RAC value was 35 pCi/g.

EPA added that when calculating dose, the RAC and RSAL Working Group methodologies seemed to be generally consistent, but the risk calculations used by the RAC and the RSAL Working Group applied different methodologies. The RAC did not calculate risk directly. The RAC calculated a dose value and then used a conversion coefficient for risk. EPA risk equations calculate risk directly instead of assigning a dose per unit intake; EPA assigned a unit of risk per unit intake.

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A member of the Focus Group asked whether or not there was a way to compare the RAC results to the current results. If there were any parallels or points of departure between the methods, how might comparisons be conducted? The basis for this question is that the RAC was an independent scientific technical body, and one that used sophisticated approaches to evaluating dose and risk, yet the results are mistrusted. How can the Focus Group be sure that the new results are any better if there is no comparative analysis? How can the Focus Group be sure that the current methodology and results are reasonable and accurate?

The City of Westminster added that in the Draft Task 3 Report, there is little mention of the RAC process, so peer reviewers of the Draft Task 3 Report would not be able to make correlations to the RAC results against the RSAL Working Group results. The City of Westminster also stated that the agencies provided an outstanding analysis as described in the Draft Task 3 Report, yet there was a need to expose, in further detail, RAC's results.

Reed stated that AlphaTRAC would send a copy of the RAC report for inclusion in the peer review of the Draft Task 3 Report.

EPA made an additional criticism regarding Appendix G and the inclusion of the RAC report. EPA disagreed with the air mass loading value used by the RAC in that the RAC's mass loading values were two orders of magnitude higher than any actual values that have been scientifically validated.

CDPHE concurred with EPA and further added that the current study conducted by the RSAL Working Group resulted in a much better product due to the increased knowledge base regarding the process. The issue of mass loading surfaced when the RAC investigated non-routine events of fire.

A member of the Focus Group defended the RAC's air mass loading values and felt that the values were, in fact, too low. The member also described the reason why the RAC reviewed a fire scenario, which was in response to the peer review process. Peer reviewers wanted consideration of a fire event. Upon review of the fire scenario, the RAC discovered big increases in mass loading when there is a fire.

Reed clarified the point of the discussion. The point the agencies were trying to make was that *annual* average mass loading values were not as large as perhaps might be seen directly after a fire. Large increases in mass loading probably occur directly after a fire, but will not dramatically affect *annual* average mass loading values.

The group segued to a discussion about the October 30, 2001 public meeting. The Focus Group expressed concern that a dialog strictly between the Focus Group and the principals was needed. CDPHE responded by describing the format of the meeting, though a formal agenda has not been published yet. The key stakeholder groups will have an opportunity to present their concerns, views and issues with ample time for the principals to respond. After that, an invitation for public comments would be extended.

Additional comments were made regarding the process, which include:

- Even though major resources are being allocated to homeland security, the cleanup budget remains very strong;
- Having an increased awareness that cleanup issues may very well be sidetracked due to an announcement issued by the Assistant Secretary of Energy putting Rocky Flats on notice that because of September 11 events, cleanup milestones may be jeopardized.
- A level of precision is necessary for effective communication at the public meeting on October 30, 2001.

### **Task 3 Peer Review - Framing the Questions for the Reviewers**

The Focus Group agreed to review the Draft Task 3 Report and form discussion questions for the peer review process. A decision was made by the Focus Group to continue policy discussions, if appropriate, after the public meeting of October 30, 2001 with the principals.

Colorado Department of Health & Environment (CDPHE) stated that once the Task 3 Report peer review and the Focus Group review of Task 3 Report have been completed, a final report will be developed. Similar to the RAC report process, all five tasks will be documented, with final comments on the proposed RSAL framework and rationale. From there, the final report will be released for public review and comment.

### **ADJOURN**

The meeting adjourned at 6:30 p.m.

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

**Appendix A  
Participant's List**

**Participation List for  
RFCA Focus Group Meeting of 10/17/01**

<b>First</b>	<b>Last</b>	<b>Company Organization</b>
Melissa	Anderson	RFCLOG
Christine	Bennett	AlphaTRAC, Inc.
Kent	Brakken	U.S. DOE - RFFO
John	Corsi	Kaiser-Hill Company, LLC
Sam	Dixon	
Shirley	Garcia	City of Broomfield
Joe	Goldfield	RFSALOP
Steve	Gunderson	CDPHE
Mary	Harlow	City of Westminster
Jerry	Henderson	RFCAB
Victor	Holm	RFCAB
Michelle	Kump	RFCAB
Ann	Lockhart	CDPHE
Tom	Marshall	Rocky Mountain Peace and Justice Center
Bob	Nininger	Kaiser-Hill Company, LLC
Tim	Rehder	US EPA
Kathleen	Rutherford	CDPHE/HMWMD
Mark	Sattelberg	US Fish and Wildlife Service
Kathy	Schnoor	City of Broomfield
Joel	Selbin	
Dave	Shelton	Kaiser-Hill Company, LLC
Carl	Spreng	CDPHE
Honorable Hank	Stovall	City of Broomfield
Scott	Surovchak	US DOE

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**RFCA Stakeholder Focus Group  
Attachment D**

Title: November 14, 2001 RFCA Stakeholder Focus  
Group Meeting Minutes

Date: April 26, 2002

Phone Number: (303) 428-5670

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**RFCA Stakeholder Focus Group**  
**November 14, 2001**  
**Meeting Minutes**

**INTRODUCTION AND ADMINISTRATIVE**

A participants list for the November 14, 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 (Focus Group) and summarized the meeting rules. Introductions were made.

**AGENDA**

Reed reviewed the agenda:

- Task 3 Peer Review and Wind Tunnel Technical Review - Update
- October 30, 2001 Meeting With the Principals
  - Feedback From the Principals
  - How the Meeting is Affecting the RSALs Project
  - Feedback from the Focus Group Members
- Path Forward and Schedule for the RSALs Project
- Task 3 Report - Questions and Answers on Draft Report
- Continuing the Policy Discussion - Topics and Schedule

Reed began the meeting with a discussion regarding the Rocky Flats Environmental Technology Site (RFETS) website. The RFETS website has been placed out of service for security purposes. AlphaTRAC is working with RFETS on developing solutions, as historical and current material for this Focus Group and the RSAL Working Group are no longer available via web access. The U.S. Department of Energy (DOE) is investigating how to issue information within the security parameters. Others options involve AlphaTRAC hosting the website temporarily or permanently from its server.

Reed agreed to keep the Focus Group informed of any new developments or how the problem has been solved.

## TASK 3 REPORT - QUESTIONS AND ANSWERS ON DRAFT REPORT

Reed called for a discussion regarding the Task 3 Report. The following topics were discussed (some bulleted points may have additional notes):

- Periods of sufficient rainfall;
- Depleted Uranium;
- Consideration and use of 30 years of historical meteorological data;
- Fire scenario, vegetation and revegetation;
- Mass loading considerations;<sup>1</sup> and
- Major construction is not a part of any of the scenarios developed;<sup>2</sup>

<sup>1</sup>The Focus Group revisited the mass-loading concept once again. A triangular distribution was used when the shape of the distribution was unknown. With a triangular distribution, there exists some sort of central tendency and this central tendency is more likely to be in the middle of the distribution than elsewhere. A triangular distribution tends to be useful when there are not enough data to know what shape the distribution is and there is a vague idea about the maximum and minimum data points. The Focus Group decided that a more thorough discussion of triangular distribution and mass loading could be available via email.

<sup>2</sup>EPA noted that major construction projects beyond a building, a dwelling, or a structure are not included in any of the scenarios, but the assumptions made about mass loading are sufficiently conservative to incorporate these activities.

The Focus Group discussed topics related to the rural resident scenario. The following comments regarding the approach and certain assumptions were made:

- The assumption that the rural resident will only be outdoors 20% of the time seems unrealistic;
- CDPHE will provide background basis to support the data on the percentage of time a rural resident may spend outside;
- Outdoor activities were considered during scenario development;
- Concerns about how shielding or contamination inside structures are factored in the modeling results; and
- Plant uptake and ingestion.<sup>3</sup>

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<sup>3</sup>Reed pointed out that quality factors in the actual gamma versus alpha radiation from Plutonium are included in the dose conversion factors and are also used in the risk factors when modeling for plant uptake and ingestion. Reed noted that different pathways are calculated differently for each scenario, depending on how much time is spent outdoor or indoors—shielded, and the degree of shielding one gets from a building, as well as external penetrating radiation. Each of these considerations is a variable in the calculation.

## CONTINUING THE POLICY DISCUSSION - TOPICS AND SCHEDULE

Reed introduced the policy discussion by recommending some points of interests for the path forward. Due to the variety of perspectives regarding the cleanup budget, whether the budget has changed or will change, Reed suggested that the budget discussion wait.

Reed identified two points of interest, stated as:

1. End-state discussion through the examination of end-state scenarios, end-state alternatives, and how the Focus Group currently views end-state; and
2. Identify cleanup priorities using an analysis of available options for surface water protection, surface contamination removal, sub-surface contamination, removal, risk reduction, etc.

From this point, it would be beneficial to review the budget to see how these alternatives have impacted the budget. This process can lead to looking at an integrated picture.

One Focus Group member suggested that one-on-one interviews, with facilitator synthesis of the viewpoints, be considered as a valid method of managing the diverse and complex views of this Focus Group.

Another Focus Group member asked to revisit prior policy discussions and proceed from that point.

And another Focus Group member would like to see the Focus Group's conversations streamlined with activities within the community and agency groups.

Other Focus Group members expressed frustration over the repetitive nature of some of the dialog in the group. This repetitive dialog mainly occurs during complex technical

discussions, and is intended to be educational, and iterative, so that non-technical people can contribute. Another aspect that causes discomfort for some Focus Group members is the negotiation process that exists between the community and the agencies. It was recognized by EPA that better negotiation skills for all parties would need to surface in order to make progress.

Reed suggested that the Focus Group find common ground based on interests to produce answers that help move the process along. Reed agreed to revisit this topic at the next meeting. He also agreed to develop some options for productive discussions, which may include a discussion on Uranium, policy, and priorities.

## ADJOURN

The meeting adjourned at 6:45 p.m.

**RFCA Stakeholder Focus Group  
November 14, 2001  
Meeting Minutes**

**Appendix A  
Participant's List**

**Participation List for  
RFCA Focus Group Meeting of 11/14/01**

<b>First</b>	<b>Last</b>	<b>Company Organization</b>
David	Abelson	RFCLOG
Melissa	Anderson	RFCLOG
Sean	Bell	DOE/RFFO/OCC
Christine	Bennett	AlphaTRAC, Inc.
Kent	Brakken	U.S. DOE - RFFO
Kimberly	Chleboun	RFCLOG
John	Ciolek	AlphaTRAC, Inc.
John	Corsi	Kaiser-Hill Company, LLC
Sam	Dixon	
Shirley	Garcia	City of Broomfield
Joe	Goldfield	RFSALOP
Steve	Gunderson	CDPHE
Mary	Harlow	City of Westminster
Jerry	Henderson	RFCAB
Reed	Hodgin	AlphaTRAC, Inc.
Victor	Holm	RFCAB
Ken	Korkia	RFCAB
Michelle	Kump	RFCAB
Joe	Legare	DOE
Ann	Lockhart	CDPHE
Tom	Marshall	Rocky Mountain Peace and Justice Center
Anna	Martinez	US DOE
LeRoy	Moore	RMPJC
Bob	Nininger	Kaiser-Hill Company, LLC
Tim	Rehder	US EPA
Mark	Sattelberg	US Fish and Wildlife Service
Allen	Schubert	Kaiser - Hill
Joel	Selbin	
Dave	Shelton	Kaiser-Hill Company, LLC
Carl	Spreng	CDPHE
Scott	Surovchak	US DOE

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