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UNITED STATES DEPARTMENT OF ENERGY  
PUBLIC HEARING ON THE PLAN FOR PREVENTION OF  
CONTAMINANT DISPERSION FOR THE ROCKY FLATS PLANT

WESTMINSTER RECREATION CENTER  
10455 SHERIDAN BOULEVARD  
WESTMINSTER, COLORADO

September 5, 1991

PANELISTS

- Wendy Green, Moderator, University of Colorado at Denver.
- Dennis Smith, EG&G Rocky Flats Environmental Management Office.
- Frazer Lockhart, Department of Energy's Rocky Flats Field Office.
- Martin Hestmark, U.S. Environmental Protection Agency.
- Joe Schieffelin, Colorado Department of Health.
- Erich Evered, EG&G Rocky Flats, Incorporated.

REVIEWED FOR CLASSIFICATION/UCNI

By [Signature]

Date 9/20/91

ADMIN RECORD

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## I N D E X

	<u>SPEAKER</u>	<u>PAGE</u>
1		
2		
3		
4	Moderator Comments	
5	Wendy Green, Moderator, University of Colorado at Denver.	2
6		
7	Opening Remarks	5
8	Dennis Smith, EG&G Rocky Flats Environmental Management.	
9		
10	Public Comments	
11	Penelope Deem, Director of Front Range Alternative Group (FRAAG).	14
12		
13	Ken Korkia, Technical Assistant for Rocky Flats Clean-up Commission.	18
14		
15	Dr. Biggs, Rocky Flats Clean-up Commission.	20
16		
17	Susan Hurst, Publisher of Environmental Information Network.	24
18		
19	Paula Elofson-Gardine, Executive Director of Environmental Information Network.	28
20		
21	Barb Moore, President of Rocky Flats Clean-up Commission.	32
22		
23	Joe Tempel, Rocky Flats Clean-up Commission	35.
24		
25		

P R O C E E D I N G S

(7:05 p.m.)

1  
2  
3 MS. GREEN: I'd like to take this opportunity to  
4 formally commence tonight's public comment meeting and  
5 welcome you on behalf of the U.S. Department of Energy.  
6 Tonight's meeting is officially designated as a public  
7 hearing for receiving comments regarding the Department of  
8 Energy's Plant for Prevention of Contaminant Dispersion.  
9 Tonight's meeting is being held the 5th day of September,  
10 1991, at the Westminster Recreation Center, located at 10455  
11 Sheridan Boulevard, in Westminster, Colorado and we are  
12 commencing at 7:05 p.m.

13 My name is Wendy Green, and I will be the Meeting  
14 Officer for tonight's public hearing. I work for the Center  
15 for Public-Private Sector Cooperation and the Center for the  
16 Improvement of Public Management, both of which are  
17 affiliated with the Graduate School of Public Affairs at the  
18 University of Colorado at Denver. In addition to technical  
19 facilitation duties like I am performing tonight, my work  
20 with the Centers includes the direction of several  
21 management development training programs for public sector  
22 managers and public policy research.

23 I have been asked tonight by the Department of  
24 Energy to conduct this public hearing as an independent,  
25 unbiased, and neutral moderator. What that means is that I

1 am not an advocate for or against any party, nor am I an  
2 advocate for or against any position taken by any party  
3 during tonight's meeting. It is my job to ensure that all  
4 interested individuals and organizations have the  
5 opportunity to comment on the Department of Energy's Plan  
6 for Prevention of Contaminant Dispersion for the Rocky Flats  
7 Plant. Copies of the plan are available for public review  
8 at several locations. It addresses the potential release of  
9 contaminants resulting from environmental investigation and  
10 interim remedial action construction activities that will be  
11 conducted at the Rocky Flats plant under the INteragency  
12 Agreement.

13 In a few minutes I'll go over the procedures that  
14 we will follow during tonight's meeting. Before I do that,  
15 however, I'd like to introduce the Panel who will be taking  
16 your comments this meeting.

17 At the far end is Mr. Joe Schieffelin, who is  
18 representing the Colorado Department of Health; to his left  
19 is Mr. Martin Hestmark, who is representing the U. S.  
20 Environmental Protection Agency; the next person is Mr.  
21 Erich Evered who is representing EG&G Rocky Flats,  
22 Incorporated; and the closest person to me is Mr. Frazer  
23 Lockhart who is representing the Department of Energy's  
24 Rocky Flats Field Office.

25 Before we go any further, Mr. Dennis Smith from

1 the Environmental Management office of EG&G will present an  
2 overview of the Plan for Prevention of Contaminant  
3 Dispersion.

4 MR. SMITH: I see some familiar faces out there.  
5 People who were here about a month or so ago when we gave a  
6 presentation and went through the PPCD and I just want to  
7 take about ten or fifteen minutes at most and sort of  
8 reintroduce the subject and get down to the essentials of  
9 it. The history of the PPCD is that it is an IAG required  
10 document. It is largely the product of concerns voiced by  
11 the public and others about the potential for the release of  
12 contaminants from Rocky Flats during our activities that we  
13 are conducting and their migrations off-site and the risks  
14 that they compose to people who would be off-site. In risk  
15 assessment terms we call them receptors, but it is the  
16 public.

17 If you read the IAG description of what the PPCD  
18 is supposed to do, it talks a lot about contaminants being  
19 released, wind-blown contamination, and it talks an awful  
20 lot about the human health risk. In implementing the PPCD,  
21 the document that we have tonight, we used risk assessment  
22 techniques.

23 We are currently operating the Plant remediation  
24 activities through what is known as the interim plan for  
25 prevention of contaminant dispersion. A few months ago when

1 it became apparent that this document would not be ready in  
2 time to coincide with the start-up of our remedial  
3 investigation activities, we put together an interim plan.  
4 And the interim plan is taken directly from something that I  
5 think most of you people are familiar with and that is, a  
6 year or so ago when we were getting activities relating to  
7 the construction of the 881 Hillside interim measure  
8 remedial action, a lot of concern was voiced about dust  
9 contaminants being released. At that time we put together a  
10 plan which included things such as shut-down when wind  
11 speeds got to certain levels, shutting down operations when  
12 airborne contaminants were measured at certain levels,  
13 wetting the turf, things such as restricting vehicular  
14 traffic, things like that. So, we took those basic concepts  
15 and rolled those into the Interim Plan for Prevention of  
16 Contaminant Dispersion, the IPPCD.

17           What we found to date is that the IPPCD is really  
18 very effective at reducing contaminant dust loading. Over  
19 the past several weeks, we have done an awful lot of work  
20 doing what are known as test pits and drilling and things  
21 like that. We have found that the airborne dust  
22 concentrations that we are measuring are several hundred  
23 times below what our accepted shutdown criteria for  
24 contaminants. That is just a brief background of the PPCD.

25           The IAG was not quite clear on what the scope of

1 the PPCD should be and since we took a risk assessment  
2 approach, we went through this sort of analysis where we  
3 identified that the scope of the PPCD should really be to  
4 address the hazards associated to the off-site public, now  
5 that is people who live off-site, during remedial  
6 investigations and interim remedial actions. We did that by  
7 defining three periods of activities. The remedial  
8 investigation period, the IRA period; a no action period,  
9 which is a time when nothing is going on at the site. There  
10 are no intrusive activities. I have a slide here which  
11 shows what intrusive activities are, and then the remedial  
12 action period. I want to take just a second and focus on  
13 this remedial action period and explain what is going on  
14 there.

15           In the process after you go through the remedial  
16 investigation feasibility study, write a record of decision,  
17 you then have to go through some sort of remedial action.  
18 A component of that is evaluating in the feasibility study,  
19 whether or not the activities that you might take are too  
20 hazardous to workers, to the public and things like that.  
21 So although some people might think that the PPCD should  
22 really address a remedial action period when there would be  
23 very substantial earth moving activities, it really does not  
24 and those hazards are addressed as part of the feasibility  
25 study.

1           We identified plant-site general workers as people  
2 who could be exposed; we identified remediation workers as  
3 people who could be exposed; and, what we find is that we  
4 have--in this activity period, we have site specific health  
5 and safety plans which protect those people. Site specific  
6 health and safety plans which protect remediation workers  
7 during a no action period, if in fact we did have to go out  
8 and take some samples or something like that. And then in  
9 the no action period, the hazards to the outside public and  
10 plant-site general workers are addressed through the  
11 baseline risk assessment, which is another required super  
12 fund document.

13           So just in summary, the PPCD scope addresses the  
14 off-site public risks resulting from the potential release  
15 of contaminants; resulting from remedial investigations and  
16 interim remedial actions. The guts of the entire PPCD can  
17 pretty much be pulled off of this slide right here.

18           You can think of yourself as a project manager who  
19 is going to take on some sort of intrusive activity. What  
20 we did was we used risk assessment techniques to establish  
21 soil contaminant threshold levels. That is simply the  
22 concentration in soil of a contaminant which, if it is  
23 released due to drilling or something like that, would  
24 result in an off-site risk attaining some certain level.  
25 And the level that we chose to establish our soil threshold

1 levels was a lifetime excess cancer risk of one in a  
2 million; one times  $10^{-6}$ . What that does is that puts us  
3 down on the conservative end of EPA's range of benchmark  
4 risks of  $10^{-4}$  to  $10^{-6}$ . So we are being conservative,  
5 targeting the low end of that range.

6           So if you are a project manager, you come and you  
7 ask yourself, well, where I am going to drill are my soil  
8 contaminants greater than my soil thresholds? If they are  
9 not, you implement under what we call Stage 1. And Stage 1  
10 is basically the IPPCD, the Interim Plan for Prevention of  
11 Contaminant Dispersion. It involves things such as wind  
12 speed criteria, soil wetting, soil covering, standard  
13 operating procedures, decontamination procedures, worker  
14 health and safety monitory and monitoring airborne action  
15 levels. Things that we are currently doing, things that we  
16 have demonstrated work very well.

17           In addition to implementing under that he has to  
18 monitor for the effectiveness of those controls and he has  
19 to monitor for the compliance with established airborne  
20 contaminant action levels.

21           Define a couple of terms. We can think of the  
22 soil threshold levels as the soil speed limits,  
23 concentrations that if we exceed, we feel that we need to  
24 take some evasive actions. Airborne contaminant action  
25 levels are levels that we can actually measure in the air

1 near the activity. You can think of those as a speed limit  
2 also, too. We are sitting there monitoring whether or not  
3 we are exceeding this benchmark speed limit.

4           So, in fact, if we implement under Stage 2, we  
5 continue in those loop. If in fact we exceed our soil  
6 thresholds we have to implement under what we call Stage 2.  
7 Stage 2 is everything that is in Stage 1, plus as this slide  
8 over here indicates, some additional engineering oriented  
9 dispersion preventions measures and monitory. Things such  
10 as additional wetting or wind curtains, or use of  
11 surfactants to hold the dust down and high volume  
12 monitoring.

13           You then implement under Stage 2 and you then have  
14 this monitoring loop again, where we are continually  
15 monitoring while we are conducting our activities to make  
16 sure that the controls that we are taking are in fact  
17 working. So, if we are in Stage 1, I just want to show you  
18 once again what the control and monitoring requirements  
19 truly are because these are the things that are actually  
20 protecting the public. Stage 1 soil concentrations are  
21 below the thresholds; wind speed criteria we shut down are  
22 drilling activities if the wind exceeds 35 miles an hour; we  
23 shut down test pitting and other intrusive activities if the  
24 wind speed exceeds 15 miles an hour; extensive soil wetting;  
25 soil covering over piles that could be left open for any

1 length of period; standard operating procedures;  
2 decontamination procedures, very, very important to keep us  
3 from spreading contamination say from one drill pad to  
4 another as we move drill rigs around; worker health and  
5 safety procedures in monitoring. Again, those are detailed  
6 in our health and safety plans. And real time emission  
7 monitoring and real time emission monitoring is a point out  
8 standing there with an instrument which will tell you on the  
9 spot how much dust you are truly emitting.

10           Then, as we just pointed out, Stage 2 is  
11 everything in Stage 1, plus additional dispersion control  
12 measures. These more rigorous engineering controls that we  
13 talked about, and high volume monitoring. So, in a capsule  
14 form, that is the PPCD.

15           Wendy.

16           MS. GREEN: Thanks, Mr. Smith.

17           A verbatim transcript of all the oral comments  
18 that have been received tonight will be included in the  
19 Department of Energy's record of these proceedings, along  
20 with copies of any written documents that are submitted.

21           The Department will make the transcripts available  
22 at local Department of Energy reading rooms as soon as  
23 possible. For your information, a list of the locations of  
24 those reading rooms is available as a handout at the  
25 registration table.

1 I would like to encourage those of you who will be  
2 speaking tonight to submit a written version of your  
3 comments for the official record. If you have a transcript  
4 of your oral testimony, or if you have prepared a document  
5 to supplement your oral testimony, you can bring it forward  
6 to me after you've made your comments. Documents submitted  
7 tonight will be formally accepted into the record for the  
8 hearing in addition to transcripts of all the oral comments  
9 that are received.

10 You can also submit comments by mail by sending  
11 them to Beth Brainard, who is the Public Affairs Officer at  
12 the DOE's Rocky Flats Field Office by September 27, 1991.  
13 Ms. Brainard's address is available at the registration  
14 table.

15 If you would like to make comments this evening,  
16 please sign up to do so at the registration table. The  
17 registration table will then provide me with a list of names  
18 of individuals who wish to make comments. I will be calling  
19 names from that list on a first come, first served basis.

20 I will not limit the content of any statements  
21 made tonight, but please remember that comments which  
22 address issues that are relevant to the scope of tonight's  
23 meeting will be the most useful to the Department of Energy.

24 It's important for you to understand that this is  
25 not a question-and-answer session and that the panel members

1 are here to listen to your comments. They may, from time-  
2 to-time ask speakers clarifying questions to make sure that  
3 the concerns and suggestions are being made are well-  
4 understood.

5           There are other representatives of DOE and EG&G  
6 here this evening besides those who are serving on the  
7 panel. You need to be aware that any conversations you have  
8 with anyone outside of this room, or while we are not in  
9 session, will not be included in the transcript for the  
10 meeting. Therefore, if you say anything important in one of  
11 those conversations, you need to come forward to the  
12 microphone and repeat when you are called upon to make your  
13 comments.

14           All participants in this public hearing will be  
15 listed in the meeting record. And Sherry Thorsen, who is  
16 sitting down in front here is the court reporter. It is her  
17 job to transcribe, verbatim, the proceedings of the meeting.  
18 Because we want to develop a complete and accurate record of  
19 your comments, please speak into the microphone when your  
20 name has been called. We would like for you to begin your  
21 comments by stating your name and address.

22           Tonight's schedule calls for the meeting to  
23 adjourn at 9:00 p.m., and for your information, smoking is  
24 not allowed in this meeting room.

25           We will now begin the formal comment portion of

1 tonight's meeting. I want to stress that this is a formal  
2 hearing and a recorded proceeding. In other words,  
3 everything that is said at this meeting will be recorded and  
4 a full transcript will be prepared.

5 I'd like to take this final opportunity to thank  
6 you for coming tonight and for your cooperation in observing  
7 the procedures that I have just outlined.

8 The first speaker is Penelope Deem.

9 MS. DEEM: Good evening, ladies and gentlemen. My  
10 name is Penelope Deem. [REDACTED]  
11 [REDACTED].

12 I am speaking tonight as the director of the Front  
13 Range Alternative Action Group otherwise known as FRAAG. I  
14 will address a number of concerns regarding the PPCD.

15 First and foremost, this plan strikes me as a  
16 prime example of locking the barn door after the horse has  
17 been stolen. Since work resumed on Hillside 881 in the  
18 summer of 1990, a number of buildings have been erected on-  
19 site. But, apparently, no precautionary measures were taken  
20 during foundation excavation and building construction to  
21 prevent dust and contaminant re-suspension. I was told that  
22 no excavation took place; I am very curious about what sort  
23 of foundations these buildings rest on.

24 Another item of note was the apparent lack of any  
25 respirators or other protective clothing available to

1 workers during construction phases. I would hope that in  
2 the spirit of "better late than never", the basics of worker  
3 protection will be provided as the next phase as the next  
4 phase of clean-up begins. As Mr. Joe Goldfield, a retired  
5 industrial engineer, has stated on numerous occasions, even  
6 in such operations as asbestos removal, these basics are a  
7 requirement.

8           Plant credibility, while never strong, achieved a  
9 new level of depth during the informational meeting here  
10 held August 13th.

11           As a member of the Rocky Flats Clean-up  
12 Commission, I attended a meeting in August of 1990 that was  
13 held at the plant. We met with various project; managers to  
14 discuss clean-up methodology on 881.

15           Many concerns regarding effective air monitoring  
16 were voiced. The information we were given stated  
17 emphatically that high volume air monitors were the only  
18 monitors not only in place, but available. Dr. Biggs at  
19 that time provided site managers with specifics as to  
20 available real time monitors.

21           At the information meeting on August 13 of this  
22 year, I once again raised the question of real time air  
23 monitoring. Mr. Evered, you stated that real time air  
24 monitors have been in place since June of 1990. I asked for  
25 clarification on that, you again said June of 1990. I would

1 strongly suggest that if plant managers are to continue  
2 blatantly lying to the public, that you at least coordinate  
3 your stories.

4 Another evident area of concern is the acceptable  
5 levels of various contaminants that would need to be present  
6 prior to operational shut down. In even the most innocuous  
7 of shovel mining operations, strict compliance with state  
8 and federal clean air requirements are adhered to. The plan  
9 for 881 does not come close as it is presented to either  
10 state or federal regulations. AT this point in time the  
11 Colorado Department of Health and the EPA do not seem overly  
12 concerned with the unacceptable levels of air quality  
13 proposed in the PPCD.

14 At the August 13 meeting, representatives from  
15 both CDH and EPA were present on the panel. Neither could  
16 answer why the plant is under no apparent compunction to  
17 meet established clean air regulations.

18 It is clearly evident that the PPCD was put forth  
19 in an effort to convince the public that the plant is making  
20 a sincere effort to responsibly proceed with clean-up  
21 activities. The document is based on a lot of rhetoric and  
22 initially impressive figures pertaining to air quality and  
23 contaminant levels at which said levels would prompt  
24 cessation of activities.

25 The levels presented are questionable, nebulous at

1 best, the obvious lack of adherence to state and federal  
2 clean air regulations, and the total lack of independent  
3 oversight indicate to me that you will proceed in whatever  
4 manner you choose as you have as you have always done, and  
5 which to date has been dishonest, irresponsible, and  
6 performed with an attitude of immunity.

7           You are accountable, and if you were to put as  
8 much energy into performing an honorable process of  
9 remediation rather than continually attempting to  
10 unsuccessfully convince the public that you are pursuing  
11 plant clean-up in a responsible manner, perhaps actual  
12 clean-up activities could proceed in both a more timely  
13 fashion and with much more honesty and effect an exchange  
14 with the communities that your actions effect.

15           Thank you.

16           MR. LOCKHART: A question to clarify, if I could.  
17 You mentioned the 881 Hillside and that activity not meeting  
18 the state air quality standards, was that focus to the  
19 characterization activity or the plan and remeasure or were  
20 you referring to plan activities in general.

21           MS. DEEM: Plan and remeasure as it is laid out in  
22 the PPCD.

23           MR. LOCKHART: Thanks.

24           MS. DEEM: Thank you.

25           MS. GREEN: Ken Korkia.

1 MR. KORKIA: Hello. [REDACTED]

2 [REDACTED]

3 I am the Technical Assistant for the Rocky Flats  
4 Clean-up Commission. My comments tonight will be brief. I  
5 must admit that my first impression of this document was  
6 favorable. The organization is beneficial with the first  
7 section serving as an extended executive summary while the  
8 appendices provide the necessary detail. It is this detail,  
9 however, that causes my favorable impression to subside.

10 Specifically, I am concerned about the soil  
11 threshold levels that are calculated and presented in  
12 Appendix 5. These levels are so high that it is virtually  
13 assured that very few prevention measures will have to be  
14 carried out beyond those described for Stage 1. I am not  
15 convinced that proper conservatism was displayed in  
16 calculating these values.

17 I am more impressed with the interim plan which  
18 takes the philosophy that if you detect dust, you take  
19 immediate steps to curtail its generation, regardless of any  
20 consideration of what level of contamination might be  
21 present. To me this represents true conservatism.

22 In consideration of the risk assessments it is  
23 stated that the action level is based on a  $10^{-6}$  level to  
24 account for multiple contaminants and multiple pathways of  
25 exposure. What about multiple activities which are

1 simultaneously going on at Rocky Flats? Obviously, normal  
2 plant operations contribute to the risk as well as any  
3 combination of remedial activities which might be carried  
4 out simultaneously. What accounting system is there that  
5 addresses these simultaneous risks? It seems to me that  
6 each risk is considered independently of what is happening  
7 across the plant site.

8           In another area, I believe that more details could  
9 have been included in the plan with regards to the standard  
10 operating procedures for items such as general and heavy  
11 equipment decontamination.

12           Along these same lines, the document could become  
13 more user friendly if you didn't assume that people know  
14 what you are talking about when you mention things like  
15 OVA's, HNU's, and piezobalances. Perhaps you could provide  
16 a little more information on these pieces of equipment.

17           Finally, I would like to call your attention to  
18 page 3 of the plan where you state, "This document has been  
19 developed from a working group approach and is considered to  
20 be a 'final PPCD'. A final responsiveness summary  
21 addressing public comments will be developed after the  
22 public has had an opportunity to thoroughly evaluate and  
23 publicly comment."

24           Now you should realize that many members of the  
25 public are sensitive to the idea that their comments don't

1 have very much of an impact. They would like to believe  
2 that a document or a plan isn't final until they have had an  
3 input. Responsiveness summaries are often times looked upon  
4 as an exercise where the DOE addresses concerns with very  
5 standardized types of responses, similar to what one  
6 receives after writing an elected official. The document at  
7 this time should be called a "draft" final which is awaiting  
8 its final stage of approval by the public. After the public  
9 speaks, then it becomes a "final PPCD." This point seems  
10 very trivial, but to a sometimes skeptical public it is very  
11 important that the right impression be given.

12 MS. GREEN: Dr. Gale Biggs.

13 DR. BIGGS: My name is Gale Biggs, [REDACTED]

14 [REDACTED]

15 My written comments will be included as part of  
16 the Rocky Flats Clean-up Commission submittal.

17 My concerns are primarily with the air pathways.  
18 And I guess that I am concerned that this PPCD does not  
19 really address the air pathways. It is heavily based on  
20 soil samples and these are an integrated average over many  
21 years of time and they don't necessarily represent air  
22 concentrations. So I think that there needs to be a lot of  
23 work done to address the air pathways in this document.

24 There are two major emission sources; there is the  
25 plant exhaust and the fugitive emissions from the disturbed

1 soil. About a year and a half ago as a member of the  
2 Governor Romer's Scientific Panel, we attempted to calculate  
3 an upper limit on what may be coming out of the plant. And  
4 we thought a rather simple approach to this would simply be  
5 to take the maximum amount of air flow that flows out of the  
6 ducts, multiply it by the lower detectable limit of the  
7 sensors and use that as an upper limit.

8           We found we were unable to do that because when we  
9 started trying to define the air flow through the system, we  
10 found that the pito (phonetic) tubes put in the ductwork had  
11 never been calibrated since they had been installed, so we  
12 couldn't depend on the air flow out of the building. We  
13 tried to look at the lower detectable limit of the sensors.  
14 We found that they were so poorly located in the ductwork  
15 that we just didn't believe that they were represented at  
16 all. So, simply trying to put together two numbers, we  
17 were unable to do so to look at what maybe an upper limit  
18 complied emission. So that is still is an unresolved issue  
19 in my mind.

20           In terms of the fugitive emissions, I think there  
21 are tremendous questions left in that area. I don't think  
22 they have been studied well, nor do I think they are even  
23 really understood. And, I expressed some of these concerns  
24 at the workshop, and I will not repeat those again tonight,  
25 but there was a study done several years ago by George

1 Schimell (phonetic) with Battelle Northwest. He looked at  
2 daughter products of uranium coming off from tailing piles.  
3 And he found that the radioactivity of the uranium as it  
4 left the tailings was probably maybe just a little above  
5 background. But, then when he started looking at the  
6 daughter products of these uranium emissions, he found out  
7 that there was an increase of an order of magnitude in the  
8 radioactivity off-site than there was that was coming off  
9 the site itself due to this daughter relationship of  
10 radioactivity.

11           Also, another study done at the Trinity site in  
12 New Mexico looked at plutonium in the soil and what has  
13 happened to it as it aged over time. It was found that the  
14 plutonium 238 actually went down in the soil, got taken up  
15 in the plants and was brought out of the soil through the  
16 plants and in this way then got into the food chain both  
17 through ingestion as well as airborne as the plant dies and  
18 decayed. I don't think there had been any real looking at  
19 the daughter products of plutonium as it gets out into the  
20 environment or how it is transported through the airborne  
21 mechanism.

22           There is another concept that I have not heard  
23 mentioned at all yet, and that is the alpha recoil off from  
24 particles of plutonium. If a surface or a plutonium close  
25 to the surface ejects its particle inward or ejects its

1 emissions inward into the particle, there is enough energy  
2 to blast a little piece of plutonium off from that plutonium  
3 particle. So, in essence, as that particle moves through  
4 the air, you are actually increasing the number of plutonium  
5 particles that you have downwind of where you started. I  
6 don't see that that is taken into account anywhere.

7           A major concern of mine is that these particles  
8 that are being blasted off as they move along are now of  
9 very respirable size; less than a micron in size, so they  
10 are going to be a real inhalation problem. And I don't  
11 think that that has been addressed at all in the airborne  
12 pathways part of this PPCD.

13           I guess those are my major concerns at the moment.  
14 I do have another one which is kind of out of my area of  
15 expertise, but worries me a little bit.

16           That is how the risk level for plutonium was set.  
17 I was talking to someone yesterday and they indicated that  
18 plutonium risk levels were set from the old radium studies  
19 that were done many, many years ago, and that they were  
20 looking at mostly whole body and bone assessments. And,  
21 plutonium is really--instead of getting into the bone like  
22 radium, it goes to the surface of the bone and as I  
23 understand that makes it even worse in terms of risk and  
24 that perhaps even a bigger concern is that plutonium really  
25 goes for the soft tissue. I don't think there has been any

1 real looking at soft tissue risk elements here.

2 Those are some of the concerns I would like to ask  
3 you to look into in terms of your PPCD here.

4 Thank you.

5 MS. GREEN: Susan Hurst.

6 MS. HURST: Good evening.

7 My name is Susan Hurst. I am the publisher of  
8 Environmental Information Network. I am also a former board  
9 director for the Rocky Flats Clean-up Commission. I did not  
10 have a chance to review the document, but I do have some  
11 concerns that I really would like to get into the record.

12 I had a question and I was wondering if they start  
13 a real aggressive clean-up, or if by some miracle they open  
14 the plant again and start their programs again, will the  
15 Health Department or EPA or DOE provide people within a five  
16 mile radius with health insurance. And I guess drive-thru  
17 chemotherapy is out. But, I was also thinking about the  
18 evacuation. We don't have evacuation plans that the  
19 community has ever been involved with. Everybody I have  
20 talked to it is like, "Oh, my God, what would they do that  
21 for?". So, I would like to see that implemented before any  
22 restart; a real aggressive clean-up starts happening out  
23 there. There is an awful lot of accidents that can happen.

24 Also, around the 903 Pad area, I am concerned with  
25 the water that is seeping out from underneath that. You can

1 probably look tonight and see how high Rocky Flats is. It  
2 is higher than a lot of ground around there. Their ponds  
3 are very inadequate to handle flash floods, if would indeed  
4 be told they were having any out there.

5           Also, where is the water going? For years upon  
6 years upon years, there has been a steady flow from Rocky  
7 Flats to Great Western Reservoir and Standley Lake and Mower  
8 Reservoir. Where in the hell is this water going to? I  
9 know it is going somewhere; the canals look awfully deep to  
10 me where a number of years ago they were pretty much bone  
11 dry; maybe two feet. I used to ice skates on those canals  
12 when I was a kid and they were always like a foot to two  
13 feet to the top. These canals have got to be 12 feet deep  
14 at least. Just in the last two years, I've noticed, bingo,  
15 we've got water again. Where is it coming from? I think I  
16 would like to see that tested and have signs put up so the  
17 children won't play in the water like they like to do,  
18 anywhere else in the country, but here.

19           Also the Chinook Winds--I don't know when the  
20 wind speed is below 15 miles an hour out at Rocky Flats.  
21 And they have proved before when they were trying to plow  
22 under the plutonium in the soil, we had elevated readings in  
23 all our air monitors. Thanks to Gary Potter negotiating  
24 with the county to give them a fugitive dust permit, I don't  
25 think this should be allowed to happen. If we have to,

1 let's dome the whole thing over and take our prisoners out  
2 there and let them do it. We've got to come up with a plan  
3 other than, well, we are not sure about this but in the very  
4 end, the public that knows the issue, that doesn't have  
5 their economic base out there on inflated salaries, saying  
6 it is okay when they don't read the same things we do.

7           This complex clean-up book that I was reading  
8 while I have been home sick from work is a very big eye  
9 opener. Believe me, we have got stuff out there that should  
10 not be disturbed. Dome it over and then let's see what we  
11 can do, but I can't stand the thought of one more Fall with  
12 100 mile an hour winds bringing that shit to Denver,  
13 courtesy of Rocky Flats.

14           Do you have any questions for me?

15           MR. LOCKHART: Yes, I had one, Susan. The canals  
16 you are talking about, are you meaning the ditches, the  
17 water ditches, a number of them that run west out of the  
18 foothills and a couple of them do go through Rocky Flats  
19 buffer zone.

20           MS. HURST: You bet they do. Yeah.

21           MR. LOCKHART: Those are the ones you are  
22 referring to?

23           MS. HURST: I'm thinking the water is being  
24 diverted somewhere. There are too many water tables coming  
25 through and going down into Lyden and all that it just

1 hasn't really been addressed yet.

2 MR. LOCKHART: Your point is that they are dry now  
3 or that they have water in them now?

4 MS. HURST: It has fluctuated greatly, okay?  
5 Lyden has changed totally in the last 25 years. The lake is  
6 farther to the east where it used to be the west. And if  
7 you looked at some of those aerial surveys, you'll see  
8 americium levels are very high where it is now dry. And of  
9 course, as Gale was saying, the daughter products are what  
10 we are going to be having to look for, not just plutonium.  
11 The americium is a big problem.

12 And that leads me to one more thing. The water  
13 reservoirs, how in the hell are we going to clean these up?  
14 I don't know of a way that is not going to re-suspend those  
15 particles and be given into the water unless we can use a  
16 reverse osmosis system, deal with the brine, God knows how,  
17 but that would be one way. I would suggest, so that we  
18 don't have to inhale through the steam in your shower or  
19 whatever these added particle risks are for us. I don't  
20 want to die. I don't want my friends to die of the same  
21 stuff that everybody else is.

22 Have we had epidemiological studies done of people  
23 that have moved away; families that have lost members? I  
24 would really like to see this stuff before we aggressively  
25 tackle the environmental problems out here. I mean a real

1 good try.

2 MS. GREEN: Next is Paula Elofson-Gardine.

3 MS. ELOFSON-GARDINE: Paula Elofson-Gardine, [REDACTED]

4 [REDACTED] I am the  
5 Executive Director of Environmental Information Network.

6 I have a number of questions about this report. I  
7 feel that you have some problems with some of the tables in  
8 this report, page 38, soil contaminants. The radioactive  
9 contaminants are listed, and I am concerned about the  
10 validity of the numbers there considering 903 being up  
11 gradient from the 881 figures with radioactive seepage that  
12 we have addressed in the past year and a half.

13 We wrote a letter specifically to the plant about  
14 the seeps problem and had asked that a study had been done  
15 on that. And considering that 881 is down gradient, I have  
16 a little question about the validity of those numbers.

17 Also, number 2, where those whole soil or  
18 surficial soil samples? Table 2.3.3 where well samples and  
19 soil threshold levels with vehicle traffic are acquired  
20 there, do these numbers represent re-suspension? If so, we  
21 obviously do not have a handle on dust re-suspension and re-  
22 entrainment.

23 Another issue is the rodenticides that are used  
24 widely at the plant to kill pocket gophers, according to the  
25 Inspector General testimony by Thomas Courtney, many animal

1 species are under a control program because redistribution  
2 of plutonium in soil due to pocket gopher activity etc.,  
3 there are few studies available, although I do have some of  
4 them on study of the native animals that are inhabiting this  
5 area. It seems odd though that there are a few tissue  
6 comparisons in the animal autopsies that have been done. I  
7 would like to see more data on the radio-ecology on those  
8 areas that have been Superfund designated.

9           Also, are the release fractions reasonable  
10 considering the Chinook Wind problems and plutonium and  
11 respirable dust fraction reports. It just doesn't seem to  
12 be copacetic. Also, the plutonium and respirable dust  
13 report from 1987, cited vehicular re-suspension as one of  
14 the worst problems in terms of the re-entrainment problem at  
15 the facility. I feel that there is a little bit of a fudge  
16 factor involved there in this report that it is not given  
17 enough attention.

18           Also, some of the soil decontamination reports  
19 from the past have listed colloidal components in the  
20 surficial soils that may have a propensity for further re-  
21 entrainment and re-suspension that have not been cited in  
22 this report. I would ask that you go back and look at my  
23 PEIS testimony that was submitted for all three PEIS  
24 processes in a bound volume that cites some of those reports  
25 that is more specific in terms of title and author and date

1 and identification numbers etc.

2 Fugitive dust emissions are extrapolated from  
3 mining studies, but radioactive dust has been characterized  
4 as sub-micron particles that are electrostatic in nature  
5 with infinity settling rates. How exactly do you propose to  
6 control those electrostatic radioactive particles if you are  
7 not containing your clean-up areas with domes or temporary  
8 buildings with electrostatic precipitators or similar  
9 technology that will help settle those particles out.

10 We have brought the containment with dome or  
11 temporary building concern to DOE and Rockwall, now EG&G.  
12 Two and a half years ago, with the first 881 hearing, that  
13 has been ignored and pushed under the carpet repeatedly at  
14 every hearing since then. We'd like to know why there has  
15 been a refusal to acknowledge the need for containment with  
16 any kind of remediation.

17 Also, in regards to the PPCD, we would like to  
18 know why there is not signage that this in fact the  
19 Superfund remediation site all along the roadways. It  
20 should be fenced off so children can't set haystack fires or  
21 enter the area of contamination with radiation, etc. There  
22 is no recognition that these areas are Superfund site or  
23 contaminated. That haystack fire that occurred had 217  
24 times greater readings than the Colorado average of 0.4 of  
25 Pu.

1           Also, there was new hay brought into that haystack  
2 fire area that was matted down in that area east of 903 to  
3 abate the re-suspension. Five years ago there was hay  
4 brought in that has shown an accumulation over time with  
5 higher readings with the ash from that hay. We would like  
6 to know why there was an accumulation on the top portion of  
7 that hay since then, and is that a reflection of the re-  
8 suspension and reattainment and spread from 903 still.

9           With discovery of tracking cesium and rings of  
10 trees, we would like to know why you have not applied the  
11 same methodology towards tracking plutonium and americium in  
12 the indigenous species of trees, etc., in the buffer zone  
13 area to check time extrapolations on uptake in the eco-  
14 system in the area.

15           Also, the testing of private wells, 40 plus,  
16 between Indiana and Standley Lake should be undertaken to  
17 try to locate where the millions of gallons are going that  
18 are said that are to be released from the "C" series, but  
19 appear to be disappearing in sand lenses or fractures to the  
20 aquifers. If in fact we have sub-surface drainage,  
21 resurfacing in wells, or ground-water contamination, we  
22 might as well make Great Western B-6 Pond and Standley Lake  
23 C-3 Pond.

24           Do we have a toll free number for what the daily  
25 readings are of re-suspension and re-entrainment from

1 remediation activities. I would like to know what the  
2 plutonium count for the day is, if you don't mind. Kind of  
3 like the pollen count and the plutonium count, I would  
4 really like to see us be able to track that.

5           Also, there are dispersion maps that have been  
6 generated every 15 minutes for the last two years. You have  
7 greater than 40,000 dispersion maps from that process. We  
8 would like you to produce, go back and get a composite of  
9 the high concentration and probability areas of dispersions.  
10 You know, considering the SF-6 survey showing that your  
11 effluent reaches the Continental Divide, Greeley, Southeast  
12 Denver, etc., and in relationship to that, I would like to  
13 enter into testimony the living within a radioactive fall-  
14 out zone flyer that shows the Rocky Flats Advisory Notice  
15 and various extrapolations on the front, and the dispersion  
16 plumes on the back. This is a two-sided information sheet  
17 that I would like to enter into the record at this time.

18           I have other concerns about plowing not being safe  
19 out there. When you are taking samples you need to  
20 acknowledge whether or not it is done from a plowed area,  
21 where it is whole or surficial soil.

22           Thank you.

23           MS. GREEN: Thanks.

24           Barb Moore.

25           MS. MOORE: Good evening. My name is Barb Moore.

1 I am the President of the Rocky Flats Clean-up Commission.

2           The testimony offered tonight will not include our  
3 written comments. These will be prepared for the DOE at a  
4 later date. We would ask for an extension at this time for  
5 the written comments of September 27th of at least 15 days  
6 as there was a 15 day delay in receiving our copies of this  
7 document.

8           We feel that the emission rate calculations are  
9 based on liberal assumptions in the PPCD, which will result  
10 in inaccurate risk assessments to the public. Some of our  
11 concerns are the aerodynamic particle size multiplier K is  
12 being used liberally at .45 and needs to be set at 1.0. The  
13 light vehicle traffic looks to be based on only one truck.  
14 It seems obvious that the traffic has to be much greater  
15 than what is being calculated in the PPCD.

16           We recommend that using a more conservative  
17 stability air class of F instead of the Sigma Y and G  
18 values. The DOE and EG&G need to use more conservative  
19 factors when using the Turners equations. We feel that the  
20 soil threshold levels being used in this plan are extremely  
21 high. An example, the plutonium 239 and 240 is 20,000 PCIGs  
22 for drilling. This appears to be excessively liberal.  
23 Obviously, we feel that the soil threshold levels need to be  
24 set much, much lower.

25           As it is now, the level is so high that Stage 2

1 prevention activities may never be performed. The wind  
2 speeds are set too high and we do not find any plans for  
3 work stoppages for peak gusts. There is an implication that  
4 the respirable dust emissions will be in compliance at the  
5 property line. We feel that these emissions need to be met  
6 at 10 feet from any work site. This is because--this is the  
7 standard in which mining operations must comply with.  
8 Because of the nature of the contamination at Rocky Flats,  
9 respirable dust emissions should at least meet this  
10 standard.

11               Several real time monitors need to be installed  
12 and used at each work site that will disturb any soil. We  
13 were not able to find any plan for decontamination for heavy  
14 equipment, and what resulting emissions this may contribute  
15 to the equation.

16               This PPCD must also include all activity at Rocky  
17 Flats. As it is now, the activities planned for are  
18 confined and restrictive which may result in too many faulty  
19 assumptions, thereby putting the public in excessive risk.

20               Finally, it appears that the project manager will  
21 have hundreds of tasks to perform coupled with his  
22 responsibilities of oversight. It would seem unrealistic to  
23 expect any single person, a project manager to be able to  
24 reliably accomplish all the tasks that have been set forth  
25 before him in this PPCD.

1           Again, I remind you that the Rocky Flats Clean-up  
2 Commission will be submitting extensive written comments  
3 regarding this document and we would ask for a timely  
4 response regarding the extension of the deadline.

5           Thank you.

6           MS. GREEN: Cathy, do you have any more names?

7 Okay. Can you sign up real quickly.

8           We'll take a one minute recess for Joe Tempel to  
9 sign up.

10          (Off the record.)

11          MS. GREEN: Joe Tempel.

12          MR. TEMPEL: I am Joe Tempel. I just have a  
13 couple of comments. I am concerned not only with what is in  
14 the report, but mainly what is not in the report.

15                 I feel like the scope of the document has been  
16 limited to too great an extent. Right now it is limited to  
17 just the testing activities and the interim remedial  
18 actions. And I don't see anything in the chart that we saw  
19 before us tonight, that would show that a similar study  
20 would be done for the remediation activities. I understand  
21 that there will be a study done for each individual  
22 remediation activity but nothing that will look at the  
23 additive impacts of each of those activities that would stir  
24 up dust and contamination.

25                 Nor, do I see any site-wide or plant-wide

1 contaminant dispersion plan that would look at all  
2 activities on the plan, not only during the testing,  
3 remediation or interim remedial actions, but just the normal  
4 activities going on at the plant.

5 I think all of these things add up to certain  
6 risks that should be assessed and would probably affect the  
7 threshold levels which you've identified in the plant so  
8 far.

9 Finally, I am concerned that we may never have to  
10 use this plan even as it is defined now because I am  
11 concerned that funding for clean-up at Rocky Flats will be  
12 reduced drastically. There's indications in the paper that  
13 the five-year plan or the site specific plan will show much  
14 lower funding for Rocky Flats compared to the commitments  
15 that were identified in the IAG. And these commitments, we  
16 felt, were done in good faith and should be followed  
17 through. And if any site has an IAG, those sites should  
18 receive the priority for funding and not be relegated to a  
19 lower priority based on some other system of prioritization.

20 So, I am concerned that we need to make sure that  
21 Rocky Flats gets the funding for clean-up that it deserves.  
22 Thank you.

23 MS. GREEN: Joe, for the record, can we get your  
24 address?

25 MR. TEMPLE: [REDACTED]

1 MS. GREEN: Thanks.

2 Okay. That is all the speakers that have signed  
3 up to speak. I think we might as well adjourn, unless  
4 somebody knows someone that wants to speak that is planning  
5 on coming later.

6 Okay. We will adjourn. It's 8:03 p.m.

7 (Whereupon, the meeting was adjourned at 8:03 p.m.  
8 on September 5, 1991.)

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## 1 REPORTER'S CERTIFICATE

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3 CASE TITLE: U.S. DEPARTMENT OF ENERGY  
4 WESTMINSTER, PUBLIC HEARING ON  
5 PLAN FOR PREVENTION OF CONTAMINANT  
DISPERSION FOR THE ROCKY FLATS PLANT

6 MEETING DATE: SEPTEMBER 5, 1991  
7 LOCATION: WESTMINSTER, COLORADO

8 I hereby certify that the proceedings herein are  
9 contained fully and accurately on the tapes and  
10 notes reported by me at the hearing in the above case before  
11 the United States Department of Energy, and that this is a  
12 true and correct transcript of the same.

13

14

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*Shirley Becker Traver*  
Official Reporter

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17454 E. Asbury Place  
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