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PUBLIC MEETING  
PROPOSED INTERIM MEASURES/INTERIM REMEDIAL ACTION PLAN  
FOR THE 881 HILLSIDE AREA (OPERABLE UNIT #1)  
ROCKY FLATS PLANT

Thursday, November 9, 1989  
6 - 10 p.m.  
Front Range Community College

ADMIN RECORD

"REVIEWED FOR CLASSIFICATION  
By R. B. Hoffman  
Date 6-19-90

REVIEWED FOR CLASSIFICATION/UCNI  
By George H. Detlor  
Date 6/13/90

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P R O C E E D I N G S

1  
2 MR. RICHARDSON: Good evening. I will now formally  
3 commence this public meeting concerning the public review of  
4 the United States Department of Energy's proposed interim  
5 measures/remedial action plan and decision document relative  
6 to the 881 Hillside area at the Rocky Flats Plant in  
7 Jefferson County, Colorado.

8 This proceeding is officially designated as the  
9 Westminster, Colorado public meeting on Department of Energy  
10 draft final document entitled, "Proposed Interim  
11 Measures/Interim Remedial Action Plan and Decision Document  
12 881 Hillside Area High Priority Sites" held on the 9th day of  
13 November, 1989 in the Front Range Community College located  
14 at 3645 West 112th Avenue in Westminster, Colorado, and  
15 commencing at 6:15 p.m.

16 My name is Peter Richardson. I am the Hearing  
17 Officer for this public meeting which is being held to  
18 receive comment on the final draft decision document for the  
19 purpose of identifying, screening and evaluating appropriate  
20 interim remedial action alternatives and to select the  
21 preferred interim remedial action for the designated area by  
22 the United States Department of Energy.

23 I am an attorney engaged in the private practice of  
24 law in Boise, Idaho. My law firm, Lindsay, Hart, Neil &  
25 Weigler, has offices in Seattle, Washington; Portland,

1 Oregon; San Francisco, California; Boise, Idaho; and  
2 Washington, District of Columbia. A large part of my  
3 practice and that of my firm is engaged in administrative law  
4 in the energy and environmental fields.

5 I have been retained by the Department of Energy to  
6 conduct this public meeting as an independent, unbiased party  
7 to assure the opportunity for all interested organizations  
8 and individuals dependent on the decision document.  
9 Accordingly, I am not an advocate for or against any party or  
10 for or against any position taken by any party in this  
11 matter. Rather, I am a neutral third party who has  
12 coordinated the development of the procedures to be followed  
13 in the conduct of this meeting and I will supervise the  
14 conduct of this meeting.

15 The Comprehensive Environmental Response  
16 Compensation and Liability Act, affectionately known as  
17 CRCLA, codified at 42 United States Code, Section 9601 by  
18 Public Law 96-510 mandates that before the adoption of any  
19 plan for remedial action the entity undertaking the remedial  
20 action must provide reasonable opportunity for submission of  
21 written and oral comments and conduct a public meeting at or  
22 near the facility regarding the proposed plan. That is the  
23 purpose of the meeting this evening, to provide you with an  
24 opportunity to make oral or written comments regarding the  
25 Department's proposed plan.

1           The draft proposed interim measures/interim  
2 remedial action plan and decision document was prepared by  
3 the Department of Energy and its operating contractor,  
4 Rockwell International. Public notice of this meeting was  
5 provided on October 12 through publication of a notice in  
6 newspapers throughout the Denver area. The text of the  
7 newspaper notices and the publication dates of each have been  
8 marked by me as Exhibit No. 1 of this proceeding and are  
9 introduced by me at this time for the record.

10           In addition, I have marked as Exhibit No. 2 for the  
11 record of this proceeding the draft decision documents.  
12 Written comment, which receives the same weight as oral  
13 comment and receives the same consideration as oral comment,  
14 may be submitted to me this evening or may be mailed to this  
15 address: The Environmental Restoration Program, United  
16 States Department of Energy, Rocky Flats Office, Post Office  
17 Box 464, Golden, Colorado, 80402-0464. Written comments must  
18 be received by no later than November 27, 1989, and that's  
19 somewhat different from the notice that was published in the  
20 paper. The deadline is November 27 and it's a received  
21 deadline, not a mailed deadline.

22           A written summary of responses to your comments,  
23 both oral and written comments, will be prepared by the  
24 Department. Those summaries will be made part of the  
25 official administrative record.

1 I will allow comment on all issues related to this  
2 project that individual commenters feel are relevant.  
3 However, as the presiding officer I do reserve the right to  
4 ask commenters to keep their comments relevant to the subject  
5 matter of this proceeding when I determine it's necessary to  
6 do so.

7 After reviewing the record in this proceeding, the  
8 Department may choose to modify or supplement the interim  
9 plan prior to issuing a final decision document. Notice of  
10 the final remedial plan that is adopted by the EPA, the  
11 Colorado Department of Health and the Department of Energy  
12 will be published and made available to the public. The  
13 final plan will be accompanied by a discussion of any  
14 significant changes and the reasons for such changes in the  
15 proposed plan, and a response to every comment, criticism,  
16 and new datum submitted in written or oral presentations such  
17 as this evening's proceeding.

18 At this time I would like to describe the  
19 procedures we are using in the conduct of this meeting.  
20 These procedures are designed to maximize public input.

21 First, all participants in these proceedings will  
22 be listed in the record. Sitting to my right is the court  
23 reporter who is transcribing verbatim these proceedings this  
24 evening. To the extent that any of you have prepared written  
25 comments you would also like to submit as a supplement to

1 your oral testimony, or if you have a transcript of your oral  
2 testimony bring it forward with you when you testify. I will  
3 hand it to the court reporter and mark it as an exhibit to  
4 the proceeding and it will be entered into the record in  
5 addition to the transcript of your oral remarks. Be assured  
6 that written comments will receive the same weight as do oral  
7 comments received this evening.

8           Second, as I have previously mentioned, comments  
9 received by November 27th, 1989 will be assured consideration  
10 in the preparation of the final interim measures/interim  
11 remedial action plan and decision document. So to the extent  
12 you or anyone else is unable to speak this evening or present  
13 written comments here this evening, you will have the  
14 opportunity to do so through the 27th of November and I would  
15 encourage you, if you know someone who couldn't make it here  
16 this evening who would like to comment, to do so in writing.  
17 Those comments will receive the same weight as if they were  
18 here at the podium.

19           No particular form is necessary for the written  
20 comments. They can be handwritten or typed, whatever you  
21 wish. Any legible written statement provided to me here this  
22 evening or to the Department to the address I mentioned is  
23 acceptable. The address is also available at the  
24 registration table if you didn't get it down when I mentioned  
25 it.

1           Following my opening statement, representatives of  
2 Rockwell International will make short presentations relative  
3 to the community involvement process and the proposed interim  
4 action. At the conclusion of my remarks and Rockwell  
5 International's presentations, I will begin calling forward  
6 those who have pre-registered to comment on the draft  
7 proposed interim action. Each commenter will have five  
8 minutes in which to comment and make suggestions for the  
9 record. Comments and questions will be responded to in the  
10 final document. Although this is not a question and answer  
11 session, the panel will be permitted to ask clarifying  
12 questions of commenters to assist them in better  
13 understanding your comments.

14           It is not my intention to limit the scope of your  
15 comments in any way. I would like to emphasize, however,  
16 that only comments related to the proposed interim action are  
17 relevant to this proceeding. I want to stress this is a  
18 formal meeting and a recorded proceeding; that is, everything  
19 said at this meeting is being recorded and a full transcript  
20 is being prepared. The Department's preparation of the final  
21 decision document will be based on the record developed at  
22 this hearing, as well as upon written comments that are  
23 submitted. Accordingly, it is imperative that we develop a  
24 complete record of your concerns and when you speak, you do  
25 so audibly and into the microphone, and one at a time, and

1 that all rules be followed.

2 Please begin your comments when you're called  
3 forward to the podium by stating your name--and if it's not a  
4 common spelling, spelling your name--and providing your  
5 mailing address.

6 Finally, a transcript of this hearing is being  
7 prepared and will be available locally for your review at the  
8 locations published in the notice for this meeting. Those  
9 locations are also available at the registration table if you  
10 would like to look at them.

11 At this time I will entertain questions on the  
12 procedures we will be following here this evening.

13 (No audible response.)

14 MR. RICHARDSON: There being no procedural  
15 questions, I will now introduce the panel that is seated to  
16 my left. The panel consists of officials from the Department  
17 of Energy, the Colorado Department of Health, the  
18 Environmental Protection Agency, and Rockwell International.

19 At this time Patrick Etchart will present a short  
20 presentation on the community relations for the Rocky Flats  
21 Environmental Restoration Project.

22 MR. ETCHART: Good evening. My name is Pat  
23 Etchart. I work in the Communications Department of Rockwell  
24 International at the Rocky Flats plant. Before we begin our  
25 discussion about the 881 Hillside area, I just wanted to

1 speak to you briefly about some of the communication efforts  
2 we have underway as they relate to the environmental clean-up  
3 effort at the plant site.

4 I want to discuss briefly the program that we are  
5 developing that will be a program that will actively involve  
6 the public from the beginning of the process throughout as we  
7 address the environmental restoration programs at Rocky  
8 Flats. I'll talk a little bit about the process. We're  
9 going to try to develop, or will develop a comprehensive plan  
10 which we can use as a blueprint for each environmental  
11 restoration project as we reach it, and then finally I'll  
12 talk a little bit about the activities that are underway now  
13 and some of the future activities that will be planned.

14 A good community relations program ensures that the  
15 opportunity exists for the public to provide input, to make  
16 comments on technical decisions related to any particular  
17 environmental clean-up effort such as the 881 Hillside area,  
18 as we're here tonight. It will keep the public informed of  
19 ongoing activities, current activities and any planned  
20 activities and finally, it will help focus and resolve any  
21 issues which might develop during any step of the process.

22 As I mentioned, we are developing a comprehensive  
23 community relations plan. The main focus of this plan is  
24 active community involvement. I cannot stress that enough.  
25 We want the community involvement to find out exactly what

1 the public would want in the program. Our plan will  
2 incorporate regulatory guidance and suggestions provided by  
3 the various regulatory agencies, including the Environmental  
4 Protection Agency and the Colorado Department of Health. We  
5 will be working closely with those agencies to develop our  
6 plan.

7           We have developed a work plan which outlines  
8 specific activities we will undertake as we develop our  
9 community relations plan. This is a draft work plan. There  
10 are copies of it available on the table if any of you are  
11 interested.

12           This plan, among the activities included in the  
13 work plan is the conducting of community interviews. We will  
14 be conducting community interviews statewide focusing on the  
15 Denver metropolitan area. We envision two-person interview  
16 teams. We will be interviewing interested citizens, local,  
17 city, county and state elected officials, representatives of  
18 environmental groups, business and civic organizations, and  
19 members of the Rocky Flats Environmental Monitoring Council,  
20 perhaps the media.

21           As a supplement--well, let me back up a minute. On  
22 these community interviews, they are the key to what will be  
23 included in the final community relations plan. We will be  
24 talking to the public, finding out what they would like  
25 included in the plan, how they would like to be informed

1 about activities, what sort of input they would like to  
2 provide and at which point. As a supplement to the community  
3 interviews, we have also developed a public questionnaire.  
4 Copies of that questionnaire are also available on the table  
5 with a stamped, self-addressed envelope and we welcome and,  
6 indeed, encourage any of you who are interested to comment on  
7 what you'd like to see in the community relations plan to  
8 pick up one of the questionnaires.

9           As we develop the community relations plan, we will  
10 provide for public input and public review and comment on the  
11 plan itself. I anticipate that there will be additional  
12 public meetings about the plan itself as it is developed, and  
13 once we go through the comment part and some of the  
14 revisions, we will revise it for the final plan.

15           Public involvement is the main purpose and the key  
16 element of this community relations plan. There are other  
17 activities, however, which we anticipate we will include in  
18 the plan, although it hasn't been finalized at this point.  
19 Among those will be an information repository. At the moment  
20 we have a public reading room open at the Rocky Flats plant.  
21 We are looking now at perhaps moving that reading room to  
22 another location in the metropolitan area that's more easily  
23 accessible to the public. This information repository will  
24 include such things as the administrative record for any  
25 particular clean-up site. That would be some of the various

1 remedial investigation reports or some of the remedial action  
2 reports.

3           The community relations plan will also provide a  
4 blueprint, if you will, for when public notice will be made,  
5 public comment periods, and public meetings. We'll have  
6 responsiveness summaries, which is basically a summary of the  
7 responses to comments made, and then again, public notice  
8 after a remedial activity has been proposed and the final  
9 selected activity.

10           In the draft work plan which we submitted to the  
11 Environmental Protection Agency, we developed some tentative  
12 schedules. We submitted this draft work plan in October. We  
13 are beginning now the process to develop the community survey  
14 plan or the community questionnaire effort and the community  
15 interviews. We anticipate having the community interviews  
16 completed by March of next year. Once the community  
17 interviews are completed, we'll take that information, write  
18 the bulk of the plan, submit that to the EPA and the Colorado  
19 Department of Health for review by October of 1990. This  
20 will again be followed by a public comment period and then a  
21 revision of the plan itself, and we anticipate that to come  
22 up in 1991.

23           We do want to develop an extensive plan which will  
24 ensure public involvement in this, and your input, whether it  
25 be in the interviewing process or in filling out the

1 questionnaire, will be greatly appreciated.

2 Thank you very much.

3 MR. RICHARDSON: I'd like to remind you that if  
4 you'd like to comment officially on the record, please sign  
5 in at the registration tables to my left. The lady sitting  
6 there will bring a card up with your name on it and I'll be  
7 able to call you to the podium in the order in which you've  
8 registered.

9 The next gentleman presenting from Rockwell  
10 International is Tom Greengard.

11 MR. GREENGARD: I'm Tom Greengard and I'll be  
12 talking to you about the plan that we've proposed for  
13 remedial action.

14 This is the first remedial action under this new  
15 program and we're pretty excited about performing it and glad  
16 to present the plan to you. I imagine everybody in the  
17 audience knows where Rocky Flats is, but I've put up an  
18 overhead for it anyway. There's the City of Westminster and  
19 Broomfield, and Standley Lake, Great Western Reservoir,  
20 Indiana Street, Highway 93, 128 and 72 is way down here.

21 There are a number of items that I'd like to talk  
22 about tonight that are in the plan, and here's what the  
23 topics are. I'm going to talk a little bit about the scope  
24 of the action, what it involves, describe the sites to you,  
25 talk about the ground water contamination that we have found

1 out there at the site, and then present the plan for remedial  
2 action and finish up with the schedules which are actually a  
3 part of the plan, also.

4           The remedial action is actually a two-phase project  
5 and consists of the interim action, which is what we are  
6 presenting a plan to perform tonight. That interim action  
7 addresses contamination in the ground water, the shallow  
8 ground water, and also an area of surface water  
9 contamination. The final action, for which we are in the  
10 middle of preparing an investigation plan, will include an  
11 evaluation of those prior actions, the interim action, as  
12 well as investigate and clean up the sources of contamination  
13 themselves, the sites where the wastes were buried, and also  
14 look at contamination in the bedrock, bedrock ground water.

15           Here's the area of the plant again. Here's the  
16 plant boundary at Indiana Street, and here is the area that  
17 we will focus on tonight. This is the 881 Hillside area.  
18 It's in the southeast quadrant of the plant site, right  
19 there, and it's about a mile and a half from this area on the  
20 hillside all the way to the plant boundary, Indiana Street.

21           Here's another picture of that same area that shows  
22 what the sites look like on the hillside and I'll tell you a  
23 little bit about what the wastes are in each one of those.  
24 Up here, this is a sanitary sewer line break that occurred in  
25 January of 1981. An earthen dam was built to contain the

1 break so it wouldn't go down here into the interceptor ditch.

2           These sites right here, 105.1 and 105.2 are fuel  
3 oil tanks. They were filled with asbestos at one time and  
4 are now filled with concrete.

5           This site here, labeled 106, is an outfall from the  
6 sanitary sewer sump line, and this little skimming pond right  
7 there was put in there in 1973. An oil leak was discovered  
8 on the hillside and an oil skimmer was brought in there and  
9 that oil was cleaned up. At the present time there are some  
10 fairly low level organic compounds that do come out of that  
11 footing drain. In fact, maybe I didn't mention that, but the  
12 footing drain actually--there's a drain that goes all around  
13 this building, Building 881 and that's what we named the  
14 hillside after--that collects ground water and drains the  
15 building itself. That line is also the line that feeds into  
16 the skimming pond and that's where the low levels of organics  
17 are coming from.

18           This site here, 102, was used for disposal of  
19 drums, about 30 to 50 drums containing oil sludge. That was  
20 in the 1950's. During the investigations, I should say that  
21 we did not find any evidence of those drums remaining and it  
22 is possible that they weren't even put there. One of the  
23 ways that we start to investigate all the sites is that we  
24 look at our photos, number one; and number two, we interview  
25 all the employees, and some of these sites, this is where

1 employees thought wastes might have been deposited or spilled  
2 or maybe they walked out the back door--that's what they did  
3 in the 1950's at every facility--and some of these just had  
4 to be checked out. So these were not definite sites, but  
5 these were all the sites that we could get information about,  
6 and it's worth bearing that in mind as we go through the  
7 process because some of these sites we won't find any actual  
8 source, and at some point in the remedial investigation  
9 process, the remedial action decision, they will require  
10 probably no action; whereas, the actual contamination, they  
11 emanate only from a few of these sources on the hillside and  
12 that's the case at this particular site.

13           103, this site up here, that was an area where  
14 unknown liquids were deposited or placed in a little pit  
15 there in the 1960's. Again, that's something we didn't have  
16 confirmation on what the liquids were or even the exact  
17 location, but as near as we could locate it based on photos  
18 and employee interviews, that's where we put it.

19           This site here, radioactive soils, are soils that  
20 were contaminated with low levels of plutonium from the fire  
21 at the plant in 1969 were placed out here and those soils  
22 were contaminated by the firemen's feet after they walked  
23 outside the building from fighting the fire that was known as  
24 a staging area. It wasn't from any of the areas inside the  
25 buildings at all.

1           These two areas here, 119.1 and 119.2, were areas  
2 of solvent storage. They had drums of solvent that were  
3 stored out there and there were multiple leaks that occurred,  
4 and these were in the years 1969 to 1972, also.

5           Okay, you'll recognize that this is the same area  
6 but I don't have the boundaries around it. What I do have is  
7 the wells and I wanted to tell you a little bit about the  
8 process that we used to investigate the hillside.

9           The first thing we did was we gridded out the whole  
10 site and we surveyed it and we then put in--we checked for  
11 chemicals in the air by photo ionization detectors. We  
12 checked at the same time all over the grid. We did scanning  
13 for radioactive materials with an instrument called a fiddler  
14 that identifies low intensity radioactive rays, and then we  
15 came in and did a number of surveys with geophysical  
16 equipment. We did about five different types and there were  
17 two kinds of surveys called electromagnetic induction at  
18 various spacings on the hillside, and we did that in order  
19 that the number--we used a number of different methods in  
20 order to zero in on the actual areas of contamination. We  
21 didn't feel that any one method, for instance, a particular  
22 type of geophysical survey would necessarily give us the  
23 answers so we used a number of methods and we used those  
24 electromagnetic detection instruments. Then we used metal  
25 detectors to look for buried drums. We used magnetometers,

1 again to look for buried metal and to look for any ions that  
2 might be in a plume of a metallic nature. We used soil gas  
3 surveys to look for volatile organic compounds. We used  
4 vertical electrical resistivity measurements in order to look  
5 for the vertical extent of any sources.

6 We used all of these and after we got through doing  
7 these preliminary screening surveys, then we made the  
8 decision on where to locate our borings and our wells, and  
9 that's what this picture shows. This is actually the wells  
10 we located, and somebody had asked me a question during the  
11 week about how we decided--how we locate our wells, and so I  
12 thought I'd add that to the presentation.

13 What I don't show here is the borings--there were  
14 about 23 or 25 borings that we put into each of these known  
15 locations, or suspected locations of source materials. So  
16 these wells were based on all the geophysical surveys and  
17 proximity to the sources themselves, plus some of these wells  
18 were older wells and we already had some information on them  
19 and also the known hydro-geology of the area, and there are  
20 33 wells out on this hillside.

21 Now, here's a little slide that shows you what we  
22 found in the ground water, ground water only. These are the  
23 maximum concentrations that we found and they're basically in  
24 the small area that I'll show you in a moment, where the  
25 multiple solvent spills were, and it ranges from

1 trichloroethylene, 17,000 parts per billion--these are very  
2 high numbers which is why we're interested in taking remedial  
3 action at this time--15,000 parts per billion of  
4 trichloroethane, which is also a solvent, non-carcinogenic  
5 one, and those were the maximum numbers for the class of  
6 chemicals called volatile organic compounds.

7           We also found some uranium at about 56 pico curies  
8 per liter and the standard for that is 40, and these here are  
9 the concentration limits. These are the discharge standards  
10 so, for instance, the limit we want to hit and we will hit in  
11 our remedial action will be five. We'll bring it down from  
12 17,000 parts per billion of trichloroethylene to 5, which is  
13 the standard for that.

14           There's also some elevated inorganic elements on  
15 the hillside, like manganese, sulfate, chlorides, and we're  
16 in the middle of a very large background study to  
17 characterize those elements right now. It's really not quite  
18 certain whether that's just part of natural variability or  
19 whether that, indeed, shows elevated levels. In any case,  
20 the remedial action we will propose for the hillside for the  
21 interim basis will include treatment of all of those  
22 compounds, not just of all of the organics, but also the  
23 inorganics that I've noted down here.

24           Here's a photo--and I hope you can see it all right  
25 in back of the room. Here's Building 881 right there.

1 Here's an area which is really much larger than we really  
2 believe. In fact, the latest data shows there is very low  
3 levels of volatiles in the water there. This is where the  
4 footing drain is, and that's at 8 parts per billion; eight.  
5 This is the area where all the high numbers are, the  
6 thousands of parts per billion, and even though this may look  
7 bigger on the photo, this is the one that really concerns us  
8 right here.

9           What's of interest to note here is that it seems to  
10 be contained. It is contained, based on the data, in a very  
11 small area of a couple hundred feet downgradient. These  
12 wastes were placed in that site from 1972--from '69 to '72.  
13 That's about 17 to 20 years ago and they've only moved a  
14 couple hundred feet in all that time. From their current  
15 location we feel, based on estimates of hydraulics and ground  
16 water flow, and also the time it's traveled to date, that  
17 it'd take another 40 to 100 years to get from its current  
18 location just to the plant boundary.

19           The reason we are going to implement some remedial  
20 action at the present time, though, is because they are very  
21 high numbers and the longer that we wait the more area will  
22 have a chance to be contaminated, and we'd rather get on with  
23 the remediation.

24           Here's a photo of the planned remediation. And  
25 again, here are the waste sites. What we're planning to do

1 is we're going to put in a French drain--and I'll show you a  
2 schematic of what that looks like. It's about 2,000 feet  
3 long and it goes all the way around the waste site. So even  
4 though we didn't really find a problem there, we're going to  
5 take the conservative approach and we are going to put this  
6 drain line all the way up through here, past here--and this  
7 is that area of contamination we're concerned with, which is  
8 right in this area--up to there.

9           As part of the design work for this trench, we're  
10 going to be drilling geo-technical borings all the way past  
11 here. Based on the current wells that we have, this area up  
12 here below this site, 119.2, has been dry. We are going to  
13 confirm that that's the case with these borings and if,  
14 indeed, it turns out that there is water in those new holes  
15 out there, we will extend this trench line all the way around  
16 that unit.

17           We're going to be collecting the water in three  
18 different places, four different places, actually. There's  
19 going to be a sump right here in the trench line. There's  
20 another sump right there where the water's going to flow  
21 into. We're going to be taking water from the--a pumping  
22 well at the worst location on the hillside there, and pumping  
23 that, and we're going to be collecting water from this little  
24 footing drain discharge right there. Those four sources,  
25 we're going to pipe them all--here is the piping from the

1 pumping well. It's going up to a waste water treatment plant  
2 up at this part of the plant, and we've located the lines of  
3 the piping to take the pumped water and the drained water  
4 outside the areas of solid waste management units, or the  
5 sites, in order to make sure we don't dig into contaminated  
6 areas, so we were careful about locating those.

7           Then we're going to treat them for the inorganics  
8 and the organics and the radionuclide contamination in this  
9 system here. Then we have another discharge line, an  
10 effluent line which comes down this road, also, in parallel,  
11 and discharges into the south interceptor ditch, where it'll  
12 be discharged to Pond C-2, out under the NPDS permit. Now,  
13 all the effluent from the system will meet the standards that  
14 were promulgated in July of this year, the special in-stream  
15 standards for Woman Creek.

16           This is a schematic of what the French drain line  
17 looks like. Here is the ground water flow coming off the  
18 hillside. There are going to be a couple feet, two feet of  
19 compacted clay, clayey soil up on top. The drain will be  
20 made of--it's a pretty standard French drain design, made of  
21 rock, regular drain rock, and there's going to be filter  
22 fabric wrapped here to help the water come into the drain.  
23 There's going to be synthetic, impermeable synthetic membrane  
24 placed on the downstream side to stop clean water from coming  
25 into the drain and to stop, also, water from going out of the

1 drain. There's going to be six-inch perforated pipe that's  
2 going to collect the water and to act as a drain, and we're  
3 going to pump it.

4 This is a schematic of the sump over here. There's  
5 going to be a submersible sump pump that will send it up to  
6 the treatment system.

7 Here is what the system's going to look like that's  
8 going to treat the water. Here are the three sources. There  
9 are really four because of the French drain. There are two  
10 different sources there where it's going to be collected.  
11 It's going to come into the influent storage tanks, several  
12 thousand gallons worth. I think each tank is 15,000 gallons,  
13 in fact. And that's going to serve as surge pumps or--excuse  
14 me--surge tanks to even out the flow coming into the system,  
15 which is designed at 30 gallons per minute, and that's going  
16 to come through a series of filters to filter out the  
17 particulate matter, and then it's going to go into this  
18 ultraviolet peroxide, hydrogen peroxide oxidation unit and  
19 we've chosen--I wasn't--we've chosen this kind of technology  
20 to treat the organics because it is a destructive technology.  
21 There are a number of technologies that would work; carbon  
22 absorption. There is air stripping. There are a number of  
23 them that are in use. This is a fairly new technology. It  
24 is in place at a number of sites throughout the country and  
25 we went and looked at all those sites. There's some here in

1 the Denver area, also, and the new regulations called SERA,  
2 which are the new CRCLA regulations, really--they were  
3 promulgated in 1986--they put the burden on whoever's going  
4 to design these systems to come up with innovative and  
5 destructive technologies, and that's what it does. There  
6 aren't any residuals. There aren't going to--there will not  
7 be carbon filters that we're going to have to dispose of at  
8 some later time and just take it to some other facility where  
9 it might be disposed of in the ground. So we were very  
10 excited to try this technology that will completely destroy  
11 the contaminants.

12           Then it's going to go out of that U-V system  
13 through another series of filters for any more particulates  
14 that may have settled out in there, and it's going to come  
15 into a series of ion exchange resins. This first one, strong  
16 base anion unit will exchange the uranium. Then it'll drop  
17 out in here. This next one, the weak acid cation unit will  
18 exchange the heavy metals and also the carbonate hardness of  
19 the TDS, and it'll be exchanged--this will be transformed  
20 into carbonic acid, which will then be decarbonized in this  
21 little unit here and carbon dioxide will be emitted to the  
22 atmosphere.

23           Then we're going to split the flow and we're going  
24 to have the rest of the--half the flow go through these two-  
25 bed demineralizer units here and TDS will be treated in those

1 units. We're going to send the other half of the flow down  
2 here through this activated alumina unit, which will treat  
3 the selenium in the water, and I should also say that these  
4 units up here will also treat for selenium and it's basically  
5 an economic decision whether to treat them all up here or to  
6 send part of the water down here.

7           When the water is joined again outside, that  
8 effluent will meet all the treatment standards, and we have  
9 some very large effluent storage tanks--115,000 gallons each,  
10 I believe--and that water before it is released to the  
11 interceptor ditch will be sampled and analyzed, and if for  
12 some reason that unit hasn't worked and the treatment  
13 standards are not achieved, we'll have a pipe in there.  
14 We're going to recycle that water back through the treatment  
15 system until it does meet the discharge limits. Again, that  
16 water will meet all the discharge standards that are  
17 required, including those newly--those July, 1989 discharge  
18 standards for Woman Creek.

19           The last part of the action I'd like to talk about  
20 is the scheduling and first is the planning activities, and  
21 we prepared the draft plan this summer and fall. We had it  
22 reviewed by the Department of Health and EPA. We went  
23 through a number of revisions. They approved the final  
24 draft, came out in October, and we submitted that for public  
25 comment on October 12th. We have now extended that public

1 comment period another two weeks. It was going to end  
2 November 10th, but it's going to come out to--we'll actually  
3 accept comments through November 27th because we realize that  
4 that's the Thanksgiving weekend, the Thursday and Friday; so  
5 through the 27th, if you want to send us comments, will be  
6 fine.

7           Then we'll sit down with the EPA and the State,  
8 review all the public comments and we will write a response  
9 to those comments, how we're going to address each one of  
10 those concerns of the citizens or comments, or whatever it  
11 might be, and then we'll finalize the plan probably towards  
12 Christmas time.

13           The next phase of the project is the design phase,  
14 design and procurement, and we started designing this job  
15 back in August, 1989. We had an agreement that was signed  
16 with the State of Colorado, an agreement of principle, and as  
17 part of that agreement we were required to start work  
18 immediately on designing a system so we could get on-line as  
19 soon as possible. The target date was January of this year--  
20 actually, I think it was the end of September--and the only  
21 problem with meeting that deadline was with the regulatory  
22 process where now an NPL site requires a number of  
23 regulations that really lengthen the time frame. I think in  
24 the end it'll probably be good. One of those requirements is  
25 for public comment period, which we're in the middle of now,

1 so that's why--in case anybody's wondering why did we start  
2 in August and we're just presenting the plan now, that's the  
3 reason, we had an agreement with the state.

4           The design will be completed in January, and at the  
5 same time, that's just for the building, the foundations, the  
6 tanks and the treatment systems themselves. The design of  
7 the French drain won't be completed until later, until--  
8 starting in January, it won't be completed until June, and  
9 that subsurface investigation that I mentioned before in an  
10 earlier slide, that's going to start in November and will  
11 take a couple of months.

12           We started to buy the equipment that we needed, the  
13 storage tanks and the treatment units and that will take  
14 place from August to May of next year.

15           I can't stress strongly enough, although I don't  
16 want you to get the feeling this project is already designed  
17 and built. This whole period now of six weeks that we have  
18 set up is for public comment. If the public does not like  
19 the plan and EPA and CDH think that there are reasons not to  
20 go forward with this plan, then we will change it. We think  
21 it's a good plan. The agencies think it's a good plan, but  
22 it's not a done deal and we will respect all the comments  
23 that you submit to us.

24           The construction phase of the project, it's phased  
25 approach again. There are four different phases of that and

1 the contracting construction period for the building  
2 foundation and the slab to put that on is going to take place  
3 from November to May. That has been delayed slightly because  
4 of the extension of the public comment period. Right now  
5 that's the only phase of the project that I've delayed the  
6 schedule on. I'm hoping that these will go forward as  
7 scheduled here. We're going to have to--we haven't had a  
8 chance to look at the synergistic effects of that since we  
9 extended the public comment period.

10 The next phase will be the construction of the  
11 building itself and putting in the tank foundations, and  
12 that'll go from February to July of next year, and then the  
13 treatment system is going to come on line in November, and  
14 it's important that we have that treatment system on-line and  
15 operating before we start building the French drain because a  
16 French drain will--water from the hillside will come into the  
17 French drain as soon as we start to build it and we need to  
18 have some treatment system on line in order to treat that  
19 water.

20 We're going to start actual treatment in November.  
21 We're going to start up and test the system using ground  
22 water from that pumping well at--that unit that had the  
23 highest compounds of organics in it, the highest levels, and  
24 so we're going to start in November of '90, ground water  
25 collection and treatment. As soon as that system is tested--

1 this will be part of the test--we're going to start to  
2 construct that unit. Contracting will start a little  
3 earlier, but then we're going to start to construct it as  
4 soon as it's tested in the late fall and that construction  
5 will go on until March of '91, and the full system will be on  
6 line right around the beginning of April, 1991.

7           And that's the end of the presentation that I have  
8 on the plan.

9           MR. RICHARDSON: Thank you, Mr. Greengard.

10           At this point I'd like to apologize for the  
11 temperature of the room. I'm told that the best way to keep  
12 it cool is to leave the doors open, so we'll have to kind of  
13 bear with the noise from the halls.

14           I'd like to remind you that if you want to comment  
15 this evening on the record, we would appreciate it if you  
16 would sign in at the registration tables. They are at the  
17 entrances to my left, and we'll begin this evening's comments  
18 by letting you know that when I call your name, please come  
19 forward to the podium. You will have five minutes for your  
20 comments. When four minutes have lapsed, I will note that to  
21 you with a hand signal, four minutes. At that time, it would  
22 be appreciated if you would begin to bring your remarks to a  
23 closure. At five minutes, I will note that to you with a  
24 hand signal, five minutes. At that point we would appreciate  
25 it if you would cease your comments.

1           The first individual signed up to comment this  
2 evening is the Honorable George Hovorka, Mayor of  
3 Westminster.

4           MR. HOVORKA: Thank you.

5           Good evening. My name is George Hovorka, H-O-V-O-  
6 R-K-A, the Mayor of the City of Westminster; [REDACTED]

7 [REDACTED] [REDACTED]  
8 [REDACTED]  
9           I'm appearing on behalf of the City to comment on  
10 the Proposed Interim Measures/Interim Remedial Action Plan  
11 and Decision Document for the 881 Hillside Area.

12           The City of Westminster supports the concept and  
13 plan to take immediate action to intercept and treat  
14 contaminated ground water at the 881 Hillside area. Failure  
15 to take such action could lead to the adverse impacts to the  
16 City's water supply, Standley Lake, which is located  
17 downstream of the 881 Hillside. Standley Lake supplies water  
18 to over 180,000 people in Westminster, Thornton and  
19 Northglenn, as well as irrigation water for shareholders in  
20 the Farmers Reservoir and Irrigation Company. Therefore, it  
21 is imperative that this work begin as soon as possible to  
22 protect the downstream water users. Westminster submits the  
23 following comments on the proposed plan:

24           The proposed plan calls for the water to be  
25 discharged to the south interceptor trench after it has been

1 treated. The water then flows into Pond C-2, which is  
2 periodically discharged to Woman Creek, which flows into  
3 Standley Lake. The City of Westminster strongly opposes this  
4 aspect of the plan in the absence of an interceptor canal  
5 around Standley Lake. Effluent generated at Rocky Flats  
6 should not be allowed to enter Standley Lake in order to  
7 protect public health. DOE's actions to oppose the permanent  
8 adoption of a water supply classification and associated  
9 standards for Woman Creek would further weaken the protection  
10 of Standley Lake, increasing the City's resistance to this  
11 proposed discharge.

12 DOE's opposition to the standards goes against  
13 DOE's "good neighbor" policy which they have publicly stated.  
14 Westminster, Thornton and Northglenn have been working with  
15 DOE on developing plans for the interceptor canal. However,  
16 no definite solution has been developed. Such an interceptor  
17 canal would not only protect Standley Lake during controlled  
18 discharges, but also during accidents and unknown releases.

19 Routing all water from Rocky Flats around Standley  
20 Lake effectively solves DOE's credibility problem with the  
21 general public, as the water can no longer impact the water  
22 supply. Without the interceptor canal, however, the City  
23 must seek the most stringent protection available to maintain  
24 its high quality water supply. Therefore, Westminster must  
25 oppose discharge to the south interceptor trench. Once an

1 interceptor canal around Standley Lake is in place, the  
2 discharge as proposed would be acceptable.

3 Westminster fully supports the remainder of the  
4 plan and urges DOE to pursue implementation of the plan  
5 aggressively. Questions did arise, however, during the  
6 review of the plan. Many stem from a lack of detail in the  
7 plan. For instance, there is no mention of how wide the  
8 French drain will be or what will be done with any ground  
9 water encountered during the construction operation. There  
10 was also not enough information available to determine if the  
11 French drain was located far enough downstream to capture all  
12 of the possible contaminated ground water. It would be  
13 helpful if Westminster could review further plans as they  
14 become available.

15 Thank you for the opportunity to comment on the  
16 proposed interim action plan. While the City of Westminster  
17 generally supports the plan, the City is very, very serious  
18 in its opposition to any discharge to the south interceptor  
19 trench unless means are in place to route Pond C-2 releases  
20 around Standley Lake.

21 Once again, I thank you.

22 MR. RICHARDSON: Thank you for your comments, Mr.  
23 Mayor. If that's an extra copy of your remarks, the Court  
24 Reporter would appreciate your providing that to him.

25 The next commenter is Joe Tempel. Mr. Tempel, if

1 you will precede your comments with your mailing address and  
2 the spelling of your name.

3 MR. TEMPEL: I'm Joe Tempel, President of the Rocky  
4 Flats Cleanup Commission. M [REDACTED]

5 [REDACTED]  
6 I am representing the Rocky Flats Cleanup  
7 Commission tonight, an organization comprised of individuals  
8 representing the peace and environmental community. We have  
9 concerns with the interim remedial action plan for 881  
10 Hillside and I'm going to summarize those comments and then  
11 subsequent speakers will discuss specific comments.

12 If I have time I'll come back to introduce who the  
13 Rocky Flats Cleanup Commission is. I'll just say at this  
14 time that we are a non-profit corporation in the State of  
15 Colorado since the summer. In July we received a technical  
16 assistance grant in the amount of \$50,000 from EPA. This is  
17 a--as you know, this is a mandated program from Congress in  
18 their 1986 Super Fund amendments.

19 The members in our group are not only concerned  
20 citizens, but they're also professionals in their field of  
21 law, physics, engineering, environmental planning,  
22 meteorology, medicine and waste management.

23 Our first general concern with the cleanup action  
24 is that we feel the public should be well aware that this  
25 represents only the containment of the pollution from only 12

1 of the 166 sites that have been identified at the plant.  
2 You've talked about what pollutants exist there and that they  
3 are--they could possibly drain into the Standley Reservoir  
4 drinking water supply.

5 To put this proposal in some context, we understand  
6 that it will cost approximately \$6 million to construct and  
7 operate over the next 20 years and the estimates for the  
8 complete cleanup of all the sites around the plan is in the  
9 neighborhood of one billion dollars, and while the Rocky  
10 Flats Cleanup Commission is very excited that cleanup is  
11 finally progressing and moving ahead, this represents only  
12 the tip of the iceberg, or should I say the trash pile, to be  
13 cleaned up.

14 We feel the public should also be aware that this  
15 cleanup will take a very long time at the rate that DOE is  
16 progressing and the purpose, as already mentioned by Tom, of  
17 the IRA is to only contain the pollutants off the site and  
18 clean up what rolls off the site until a permanent solution  
19 can be found. Unfortunately, even a temporary solution won't  
20 be operational until spring of '91, about a year and a half  
21 from now. We find this not acceptable and we feel that this  
22 interim action should be accelerated as much as possible.

23 It is also unclear in our minds when the permanent  
24 solution for these 12 sites will be in place because no  
25 schedule has been produced by DOE. As you know, the schedule

1 is to be outlined in an intergovernmental agreement and we  
2 had hoped that would be made available to the public by now.

3 We understand and you know that the permanent  
4 solution has been under study since 1987, when work began on  
5 the remedial investigation and feasibility study. These  
6 reports have still not been completed because of the  
7 inadequacies of the draft reports. These inadequacies were  
8 identified by the DOE special assignment environmental team  
9 in their report submitted in August of this year.

10 They mention that there is inadequate background  
11 characterization for metals and radionuclides; that there is  
12 a poorly defined extent of the contamination of the site; and  
13 that there is inadequate quality control of the testing so  
14 that the data may be invalid.

15 So we understand that this is only a temporary  
16 solution and that we can't really define the permanent  
17 solution until we adequately define the problem. So we--the  
18 Rocky Flats Cleanup Commission requests that these  
19 inadequacies be corrected as soon as possible so that the  
20 final solution can be implemented.

21 While the interim remedial action proposes to  
22 construct a French drain to collect pollutants that are  
23 leaching into the ground water, nothing is being proposed at  
24 this time to clean up the contaminated soils on the site. We  
25 are concerned that the citizens and workers downwind of the

1 construction site may be contaminated by the pollutants in  
2 the soil, whether it's radioactive dust on the surface or  
3 things found farther below the surface.

4           The Cleanup Commission would like to review the  
5 health and safety plan which describes how the workers and  
6 community will be protected during construction, and we do  
7 not want the cleanup to create additional health risks to the  
8 workers and the community like that which was experienced at  
9 the Rocky Mountain Arsenal during its cleanup of Basin F.

10           The Cleanup Commission would like adequate  
11 monitoring to be in place during the construction so that the  
12 environmental standards are not exceeded and we're happy to  
13 see that the community involvement plan is being formulated.  
14 As you know, it wasn't part of the IRA for 881, and we would  
15 like to be involved in that process as well.

16           In my last minute I'll just read through quickly  
17 the organizations that belong to the Rocky Flats Cleanup  
18 Commission. We have representatives from the Colorado  
19 Coalition for the Prevention of Nuclear War, the Boulder  
20 Scientists Concerned Health Technicians for a Cleaner  
21 Colorado, Citizens Against Rocky Flats Contamination,  
22 National Toxics Campaign, Sierra Club, Committee Against  
23 Radiotoxic Pollution, Networking Colorado, Physicians for  
24 Social Responsibility, American Friends Service Committee,  
25 and the Colorado Coalition for Agent Orange and Atomic

1 Veterans.

2 Thank you.

3 MR. RICHARDSON: Thank you. Mr. Tempel, if you  
4 haven't had a chance to finish your remarks, why don't you  
5 bring them forward if you have them prepared and I'll  
6 introduce them as an exhibit to the proceeding.

7 MR. TEMPEL: I gave them to you. There they are.

8 MR. RICHARDSON: Okay. Did you read them all?

9 MR. TEMPEL: No, but I feel I have done an adequate  
10 summary.

11 MR. RICHARDSON: Thank you.

12 I'd like to remind you, if you don't have enough  
13 time to finish your remarks, we can introduce them as an  
14 exhibit to the proceeding and also, if you would like to  
15 comment, please register at the registration tables to my  
16 left.

17 The next commenter is Greg Marsh, and my hand  
18 signals aren't going to work. Most people are going to be  
19 paying attention to their notes rather than me, so I'm going  
20 to not interrupt you, but I'll note five minutes when your  
21 time is up and I'd appreciate it then if you would bring your  
22 remarks to a closure.

23 Mr. Marsh, if you will precede your comments with  
24 your mailing address?

25 MR. MARSH: My name is Greg Marsh. I'm the

1 Treasurer of the Rocky Flats Cleanup Commission. [REDACTED]

2 [REDACTED]

3 Professionally, I'm an environmental chemist and I  
4 have a small business that does chemical contamination  
5 assessments. There's two very different areas that I'd like  
6 to address tonight.

7 One is the existing plutonium contamination of the  
8 surface of the soils in the French drain area, proposed area,  
9 and some of the methods that were used in deciding what,  
10 when, where and how to drill wells on the 881 Hillside to  
11 identify the underground plumes.

12 Given the fact there's been two major fires on the  
13 Rocky Flats Nuclear Weapons Plant in the last 30 years or so,  
14 it's plausible to assume that there is plutonium  
15 contamination on the surface over a wide part of the area,  
16 particularly to the southeast. This is pretty much well  
17 established in the scientific community, so much so that the  
18 National Bureau of Standards in 1978 went out there to pull a  
19 soil sample, 600 kg, 13 cm deep from right north of the  
20 southeast corner of the perimeter fence. They pulled this  
21 sample and one on the western side to--it was a 300 kg  
22 sample--to dilute the 600 kg sample down to a level which is  
23 about ten times the internationally accepted value for  
24 background plutonium in soil contamination. This is now  
25 sold. 85 grams cost \$208 from the National Institute of

1 Standards and Technology, formerly NBS. This is standard  
2 reference material, No. 4353, so we really have a dubious  
3 worldwide distinction here.

4           Given the fact that they pulled this sample almost  
5 exactly 2.9 km due west--due east of the 881 Hillside--and  
6 since there are no barriers to stop plutonium, and since the  
7 hillside itself is much closer to the plant than the area  
8 that was sampled by NBS for their soil standard, it is  
9 logical to assume that there has to be plutonium  
10 contamination on the area where the French drain will go.

11           Our group would like to implore Rockwell and Rocky  
12 Flats and DOE and others, EG&G, to make certain that these  
13 soils are properly analyzed using accepted methods, and that  
14 they are properly assessed and then the necessary precautions  
15 taken to protect the community from resuspension of these  
16 particles.

17           The other problem that I've come to grips with a  
18 little bit--and this is a little bit more identified in my  
19 own mind after some discussions with Tom Greengard day before  
20 yesterday--is the how, what, when, where and why of the wells  
21 that are drilled on 881 Hillside that justify the listing on  
22 the national priorities list and so forth.

23           Now, it's really good and encouraging to see  
24 Rockwell using a lot of geo-technical devices to go out there  
25 and identify--try to identify the site, try to identify good

1 places to drill and all that, but many of these wells--  
2 there's only 33--apparently were drilled back about 15 years  
3 ago. It is not clear, nor has it been made clear what  
4 methods were used, what validations statistically or  
5 otherwise were used to validate whether or not the proper  
6 wells were drilled, where they were drilled, and how many  
7 more might need to be drilled to adequately assess the  
8 problem. So there's a fundamental problem here as to, do we  
9 have a good handle on what we know or think we know about the  
10 contamination on 881 Hillside?

11 That's all I have to say. Are there any questions?

12 MR. RICHARDSON: Thank you for your comments.

13 MR. MARSH: You're welcome.

14 MR. RICHARDSON: If you don't feel comfortable  
15 getting up in front of a group and making comments, you can  
16 submit written comments to the Department that will receive  
17 equal weight as oral comments that are being received this  
18 evening. You can do so at an address that's available at the  
19 registration tables.

20 The next commenter is Kim Grice. Mr. Grice, if  
21 you'd precede your comment with your mailing address?

22 MR. GRICE: Yeah. My name is Kim Grice. I'm a  
23 Director of the Rocky Flats Cleanup Commission. I'm also  
24 Chairman of the Committee Against Radiotoxic Pollution. My  
25 address is 10161 Wolf Street, Westminster, Colorado. I have

1 a written comment but I'm sorry to say I didn't have time to  
2 finish it. My typing skills are a little slow, but I will,  
3 if it's okay, can I submit at a later date the fill-in for  
4 No. 4?

5 MR. RICHARDSON: Certainly. You have five minutes  
6 to comment this evening and you may submit as much written  
7 material as you would like afterwards, or to me this evening.

8 MR. GRICE: Okay. To begin--

9 MR. RICHARDSON: Before November 27th.

10 MR. GRICE: All right. To begin, DOE and its  
11 contractors at Rocky Flats have not been very nice neighbors.  
12 They have polluted the ground water and soil at their  
13 facility to the extent that remedial action is necessary to  
14 protect the public from added health risks. The public  
15 deserves to be informed that this is not a cleanup operation  
16 of hazardous wastes; it is only an interim solution to keep  
17 the contamination at these sites from spreading.

18 After a comprehensive review of the 881 IRA, I find  
19 it technically deficient in fully addressing many aspects of  
20 public concern.

21 Number one, the IRA mentioned that Rocky Flats  
22 Plant is located in a rural area where there was no schools,  
23 no hospitals, no parks within five miles of the Rocky Flats  
24 Plant site. This comment is grossly in error. The facts are  
25 that there exists 20 schools, a hospital called "Avista" in

1 Louisville, 11 child care centers, over 14 parks and open  
2 space areas within five miles from the boundary of Rocky  
3 Flats. The map shown in Figure 2-1 is not an updated map.  
4 It also blocks out major development areas east of Rocky  
5 Flats Plant and Broomfield is omitted completely. It is  
6 recommended that a detailed map showing current developments,  
7 schools, hospitals, parks, et cetera within a ten-mile radius  
8 of the Rocky Flats boundary be incorporated into this IRA.  
9 The population census in this report uses outdated 1980 data  
10 when, with a little effort, current population figures could  
11 easily be obtained from county and city records.

12           Number two, there is very little mention in this  
13 IRA regarding soil characterization. There is much concern  
14 that this remediation project will disturb soils contaminated  
15 with varying levels of plutonium and other radionuclides.  
16 See HUD's RF Advisory Notice attachment to my report. The  
17 resuspension of respirable-size dust containing radioactive  
18 elements could have direct health impacts on citizens  
19 residing and working downwind when these particulates are  
20 inhaled or ingested. As noted in attached chart, there has  
21 been an escalation of airborne contamination during past soil  
22 excavations at Rocky Flats Plant. The excavation requires  
23 2100 feet of French drain, 1320 feet of slurry walls that are  
24 4 to 20 feet deep. Excavation also includes over 2500 feet  
25 of effluent piping trenches, and excavation and encapsulating

1 86,000 square feet of contaminated soil. We are not informed  
2 of the total amount of soil in cubic yards that will be  
3 excavated at these sites.

4 Much of the proposed remedial area contains large  
5 quantities of plutonium contamination of the soil. I advise  
6 you to see attached Krey & Hardy map. A complete chemical  
7 and radionuclide soil characterization for specific  
8 construction sites has not been performed and included in  
9 this IRA. Why? Will the proposed sites be tested for total  
10 amount of respirable-size particulates to determine the  
11 amount of airborne dust that could be resuspended during  
12 construction? How many cubic yards of soil will be removed  
13 from the borrowed site south of Woman's Creek, and what will  
14 be its characterization? What safety precautions are planned  
15 for the workers? What will be the health risks to the public  
16 during the remedial actions? It is recommended that a closed  
17 environmental chamber be used to conduct any excavation  
18 within, in order to limit and filter resuspended contaminants  
19 before release to the outside environment.

20 Number three, the IRA needs to include a  
21 comprehensive site specific ambient air monitoring plan.  
22 Meteorological data pertinent to these sites is needed to  
23 determine direction and distance, et cetera, that this  
24 respirable dust might travel. According to a 1987  
25 Meteorological Tracer Study published in September, 1988 by

1 Rockwell, the distribution of emission plumes can be dynamic.  
2 The report mentions that during the 12-day study, tracer  
3 elements traveled west to the Continental Divide and as far  
4 east as 45 miles from the release site located near the 903  
5 Pad area. It was interesting to note that during the tests,  
6 the plume was in contact with the ground. Sector #2, which  
7 is southeast of the Rocky Flats Plant, according to the  
8 Colorado Department of Health, continually reports the  
9 highest levels of plutonium in soils. See the Colorado  
10 Department of Health map and chart attached.

11           Number four, other comments that relate to the 881  
12 IRA plan are as follows: No. A, deficiency in characterizing  
13 extent of soil and ground water contamination. Three bullets  
14 underneath that: 1, vertical and horizontal profile, a three  
15 dimensional profile of extent of the ground water plume  
16 should be characterized and included. There are no wells  
17 north of these SWMU units, and three, existing soil data does  
18 not characterize adequately the current status of the  
19 contaminated area. No. B, radioactive ambient air monitoring  
20 program is deficient. Number one underneath that is ambient  
21 air monitoring should analyze for uranium and americium as  
22 well a plutonium. Two, design and install new samplers to  
23 limit particulate losses within the samplers. Three,  
24 incorporate flow control systems that will maintain a  
25 constant air flow rate over sampling period. Four, expedite

1 an air dispersion study to verify and design new ambient air  
2 monitoring sampling network.

3 C, ground water data and sampling. Underneath  
4 that, number one, analytic data produced for the 881 site  
5 should be organized in a manner for easy reference and rapid  
6 evaluation by way of data base systems that permit selection  
7 and sorting of several parameters. Two, sampling procedures  
8 to fully document chain of custody. Three, sampling terms  
9 should be provided--sampling team should be provided formal  
10 training in the use of methods, et cetera.

11 No. D--

12 MR. RICHARDSON: Mr. Grice, your time is up.

13 MR. GRICE: I'll be done soon. No. D, a more  
14 comprehensive--

15 MR. RICHARDSON: If you would bring your remarks to  
16 a closure now, I'd appreciate it.

17 MR. GRICE: I'm almost done, sir.

18 MR. RICHARDSON: How far have you got to go, Mr.  
19 Grice?

20 MR. GRICE: One more paragraph.

21 A more comprehensive quality assurance--this is No.  
22 D--a comprehensive quality assurance control program is  
23 recommended to adequately document the validity and  
24 analytical data for 881 Hillside remedial actions and  
25 assessments.

1 E, there is a lack of a finalized and implemented  
2 community relations plan for the 881 Hillside Remedial  
3 Corrective Action Program.

4 F--

5 MR. RICHARDSON: Mr. Grice, there are other--

6 MR. GRICE: I only have a couple more, sir.

7 MR. RICHARDSON: Well, there are other people who  
8 would like to comment.

9 MR. GRICE: I only have a couple more. No. F--

10 MR. RICHARDSON: And your comments will be--

11 MR. GRICE: --according to the 1987 Annual  
12 Environmental Monitoring Report, VOC's are detected in the  
13 bedrock ground water below the 903 pad in Wells 1287, 1187  
14 and 1487.

15 MR. RICHARDSON: I have to insist that you cease  
16 your comments now since your time is up.

17 MR. GRICE: I'll close. I only have just a couple  
18 more.

19 MR. RICHARDSON: You're encroaching on your other  
20 folks'--

21 MR. GRICE: Could these contaminants affect--what  
22 effects will they have on the remediation at 881? Two more.  
23 G, why was Well 5586 chosen as a background well? And No. H,  
24 the Mayor of Westminster said he would accept said diversion  
25 canal to channel effluent from Pond C-2 around Standley Lake.

1 I would like to inform everyone as a citizen of Westminster  
2 that said Rocky Flats effluents then would no longer be  
3 diverted by Standley Lake, but would flow near many  
4 residential areas down Big Dry Creek. This is not an  
5 acceptable solution to me and in closing--

6 MR. RICHARDSON: Mr. Grice, if you could provide  
7 your closing in writing, wonderful.

8 MR. GRICE: Just a little close here. While it  
9 makes sense to attempt to confine the spread of ground water  
10 contamination in order to reduce added health risks imposed  
11 on the public, we should also be concerned about the daily  
12 emissions of radiotoxic waste from over 50 vents at this  
13 facility and the subsequent inhalation and ingestion of these  
14 carcinogens by our family and friends.

15 Thank you.

16 MR. RICHARDSON: If you don't have time to submit  
17 your comment orally, we'll be happy to take them in writing.  
18 In addition, if you go over your time we could be here quite  
19 late. We have a lot of people who would like to comment and  
20 I'm sure your neighbors would appreciate it if you would hold  
21 your comments to your allotted time.

22 The next commenter is Paula Elofson-Gardine.

23 MS. GARDINE: My name is Paula Elofson-Gardine, E-  
24 L-O-F-S-O-N-hyphen-G-A-R-D-I-N-E, [REDACTED]  
25 A [REDACTED] [REDACTED]. I am the Director for Concerned

1 Health Technicians for a Cleaner Colorado. I am on the Board  
2 of Directors for the Rocky Flats Cleanup Commission and I  
3 serve as the secretary to that group. I have very short  
4 comments, fortunately.

5 The lack of upgradient wells indicates deficiency  
6 regarding background levels of contaminants versus those  
7 found in alluvium measurements and ground water wells in the  
8 area known as the 881 Hillside. There is serious deficiency  
9 regarding lack of chemical and radionuclide direct soil  
10 analysis both on and off-site for determination of spread of  
11 contaminants originating from the Rocky Flats Plant.

12 Sources of contaminants are not identified so that  
13 an eventual permanent solution could be initiated. As an  
14 interim measure, the peroxide/uv application for destruction  
15 of VOC's is controversial and has not been proven for  
16 remediations of this size. The benefit of this technology is  
17 questionable in terms of the volume it is capable of  
18 handling.

19 In comparing the site diagrams of the proposed  
20 interim measures IRA plan and decision document for the 881  
21 Hillside area, and the 903 pad, mound and east trenches  
22 remedial investigation, and the RFP site map in the  
23 assessment of environmental conditions at the Rocky Flats  
24 Plant report, it appears that the area blocked out for 881  
25 remediation encroaches in part on the 903 Pad area. If this

1 is so, how will the public be protected during the  
2 remediation process from radionuclides liberated from this  
3 process?

4 Migration from the 903 area to the 881 area is not  
5 addressed as a possible source of contaminants. Where do the  
6 discharges go to from this area? We're concerned about  
7 dispersion modeling. The 886 building is adjacent to the 881  
8 area as well. Where do the discharges from this building  
9 drain to? A chart detailing ground water migration and the  
10 plant piping system and drains would assist in determining  
11 sources and potential toxicity.

12 No mention is made regarding protection of the  
13 community during remediation activities. Historically,  
14 monitoring of this area has shown elevated readings of  
15 radionuclide activity during remediations, such as removal of  
16 barrels for the 903 Pad. We would suggest a containment  
17 structure such as temporary buildings and/or domes be used to  
18 contain contaminants that are disturbed during cleanup phases  
19 of note, such as drilling and earthmoving, et cetera.

20 I have a couple of comments submitted to me by  
21 another party that I would like to submit with mine. They  
22 have a question as to existing data about the integrity of  
23 the impermeable membrane in the French drain for the period  
24 of 20 years. What is the known lifetime of that membrane?  
25 What plans exist for the disposal of the material of the

1 French drain itself when the cleanup is completed? I think  
2 there is a great deal of concern about the proximity of the  
3 903 Pad in light of the resuspension and windblown  
4 resuspension reports from the repository, that the problems  
5 with the resuspension in this area are not being addressed  
6 that already exist in that area, sands remediation.

7 Thank you.

8 MR. RICHARDSON: Thank you for your comments.  
9 Would you like to provide for the record the name of the  
10 additional person you were speaking on behalf of?

11 MS. GARDINE: Niels Schoenbeck.

12 MR. RICHARDSON: Thank you.

13 The next scheduled commenter is Dr. William Kemper.

14 DR. KEMPER: I also am making some changes in this  
15 document extemporaneously. My name is William Kemper. I'm a  
16 physicist and with a number of years experience with the  
17 Navy, following which I did a little teaching down at Metro  
18 and UCD.

19 I've read the plan with great detail and I find  
20 that as the title suggests, I'd regard it as only an interim  
21 remedial action rather than a cleanup, but it is a first step  
22 and accordingly, I believe it should be supported unless  
23 seriously flawed. Although I found it somewhat difficult to  
24 read, and possibly contains a few small errors which could be  
25 easily corrected, I didn't see anything that would cause it

1 to be rejected. Now this--some other speakers have brought  
2 up some points which I do feel should be answered.

3 We do depend on the operators of the plant and  
4 those involved with the cleanup for the--both the chemical  
5 analyses and also the places where the samples are taken,  
6 which are some of the points that have been questioned  
7 tonight, and I would trust that there seems to be a new air  
8 of "Glasnost" here with Rocky Flats which I hope will  
9 continue. I think that a lot of the antagonism comes about  
10 because in the past I think there has been a lot of cover-up  
11 or facts concealed--for example, those early fires in '69 and  
12 '67. I hope now with new frankness, cooperation, we can  
13 trust these results and this bad feeling will disappear.

14 There is a question whether Hillside 881 should  
15 have been chosen for the initial remedial action. There's  
16 one place in the report that suggests that Hillside 881 is  
17 not a very highly polluted area, but it appears that the  
18 danger--from reading the report, that the dangers from  
19 Hillside 881 are mostly these volatile organic compounds,  
20 whereas I think the public concern happens to be with the  
21 radionuclides, and the public, however, should be aware that  
22 we need to remove these volatile organic compounds, also.  
23 They are the hazard that was suspect in causing the problems  
24 out at Marietta plant, and so that I think a lot of people  
25 don't want to live with some of these volatile organic

1 compounds any more than the radionuclides.

2           The remedial action will actually affect the  
3 removal per year of about 80 pounds of these volatile organic  
4 compounds, 5 pounds of selenium, and about two times ten to  
5 the minus third curie of radionuclides, which if they are  
6 uranium, would amount to a fraction of a pound, and possibly  
7 other substances of lesser concern. But more important, it  
8 should assure--if everything goes as planned and if we can  
9 depend on this peroxide method for removing all of these  
10 volatile organic compounds--it should really assure that the  
11 seepage and drainage from the 881 Hillside will present  
12 absolutely no risk to the drinking water supply.

13           I think, though, that if this treated water goes  
14 into one of these ponds that have been used before for many  
15 purposes, and then from there, from the ponds goes into the  
16 Woman's Creek and the other creek, there could be things in  
17 the pond that will--that would pollute the cleaned water, but  
18 I think this, I'm sure, will be looked into.

19           A few little details about the report. Some of  
20 these points have been mentioned already by other speakers.  
21 I won't go into them all. I have one question, whether we  
22 speak of removing the volatile organic compounds, but I  
23 wonder if there are any other non-volatile organic compounds.  
24 I've been told that there aren't any, but I was concerned  
25 about things like dioxins and PCB's. Other metals, I think

1 you only need be concerned about the selenium, other than the  
2 radionuclides.

3 I think about the radionuclides, it would be nice  
4 if we knew more about them. Are these radionuclides that are  
5 given any analysis all natural uranium, of which there is a  
6 good deal around this area, or is it plutonium from the  
7 plant? It would be interesting to know.

8 I wonder if the French drain will contain all  
9 surface runoff during times of heavy rain. It is shown in  
10 the diagram as just extending to the surface of the ground,  
11 so there could be water flowing over the top of it. That's  
12 something that could be easily taken care of.

13 I agree that we should assure that no dust is  
14 resuspended in the air to endanger the workers or the  
15 populace below. The plan calls for--this resin absorption of  
16 the salt content calls for regeneration of these resins,  
17 which would create for every 100,000 gallons of water  
18 treated, 14,000 gallons of waste water, and that seems to me  
19 that might be a bit of a problem, though I've spoken to Mr.  
20 Anderson. He feels that that problem--there's no problem at  
21 all.

22 MR. RICHARDSON: Dr. Kemper?

23 DR. KEMPER: Okay. I'm sorry.

24 MR. RICHARDSON: Again, if you don't have enough  
25 time to comment, we'll take your written comments and

1 introduce them into the record and written comments, as I've  
2 noted earlier, receive the same weight as do oral comments  
3 here this evening.

4 DR. KEMPER: I think I had nothing else to add as  
5 to a technical factor.

6 MR. RICHARDSON: Thank you, Dr. Kemper.  
7 The next commenter is Dr. Joe Goldfield.

8 MR. GOLDFIELD: I must correct you. I'm not a  
9 doctor. I'm a poor, stupid engineer.

10 MR. RICHARDSON: Well, we've promoted you.

11 MR. GOLDFIELD: I'll accept the promotion if a pay  
12 raise comes with it.

13 MR. RICHARDSON: Certainly does, certainly does.

14 MR. GOLDFIELD: My name is Joe Goldfield. I am  
15 Vice President of the Rocky Flats Cleanup Commission and I  
16 may paraphrase some of my comments and I will submit the  
17 written comments so that you may have to study them to make  
18 sense of what I'm saying.

19 My first four comments deal with recommendations to  
20 try and improve the quality of this report which if someone  
21 were to try to make it obfuscate, he succeeded. For example,  
22 acronyms are used pages before they're defined. There is no  
23 list of acronyms to describe what they are so that you can  
24 even refer to them. There are other problems as well.

25 For example, the problem is not stated until page

1 2-31 of the report. Summary, conclusions, problem all should  
2 be up front.

3 My fifth comment. Beryllium is extremely  
4 poisonous, and just as a matter of checking to see how the  
5 ARA, the acceptable concentration was set, it is--the  
6 concentration acceptable for beryllium is understated by a  
7 factor of 2,000 when you compare it to the toxicity of  
8 cadmium and selenium, and with their accepted concentrations  
9 in air; that is, as a toxic limit. Two thousand. I believe  
10 the toxicity of beryllium is grossly understated.

11 In Tables 3-1.1 to 3-1.4, 29 substances exceed  
12 their allowable concentration. In discussing reducing these  
13 concentrations, each one is treated as if none of the others  
14 are present. In OSHA work, where more than one contaminant  
15 is present in air, the allowable concentration is no longer  
16 the maximum allowable concentration. If two contaminants are  
17 present, you have to divide the acceptable concentration in  
18 half so that the sum of the fractions of the two equals one.  
19 When 29 contaminants are present, as it is in this witch's  
20 brew, the acceptable concentration of each one should be  
21 reduced by a factor of 29 in order to be analogous to what is  
22 acceptable in air contaminant removal work.

23 Seven, Table 4-1 gives contaminant concentrations  
24 that are used for the design of the system. They are much  
25 lower than the maximums. If this system is being designed

1 for average concentrations, it is dead wrong. That would  
2 mean that half the time the system is not capable of dealing  
3 with the concentrations of contaminants flowing through the  
4 treatment systems. You have to design not only for maximums,  
5 but you should put a factor of safety on it because I  
6 understand the number of samples that are available for  
7 establishing the maximum are limited.

8           Page 4-10 says that carbon beds that must be  
9 discarded become a candidate for discharge at the Nevada test  
10 site. What a statement. What radionuclides are being  
11 collected that pose such danger that the carbon must be  
12 shipped to Nevada? There's no discussion in the report of  
13 radionuclides present. In fact, the presence of plutonium is  
14 constantly down-played throughout the report, when we're  
15 certain that it's present in large quantities.

16           The technical expertise of the report runs into  
17 question when people make stupid errors. For example, on  
18 page 4-17, a pre-heater is set down as a dehumidifier.  
19 Heating air can't dehumidify it. You can study my paragraph  
20 in more detail.

21           Selenium has an acceptable lower concentration of  
22 .01 mg/l, but its concentration is 320 times as high. In the  
23 treatment scheme that was proposed, half the water will be  
24 passed around the equipment that is designed to remove  
25 selenium. How can you possibly reduce its concentration by a

1 factor of 320 times 29--if you want to accept my way of doing  
2 it--if you only treat half the water for selenium? The same  
3 thing is true for the total dissolved solids. Half of the  
4 water bypasses the dissolved solids final cleanup system.  
5 How can you possibly cut it down by a factor of 5 when you  
6 only treat half the water?

7           The key problem has been mentioned before, that  
8 this is an interim plan, leaving all the contaminated areas  
9 in place ready to bypass the dike, go under the dike, or go  
10 through splits in the concrete. And by the way, concrete is  
11 not known as a perfect seal. It splits. It breaks. Maybe  
12 even earth movement can break it, like a little earthquake.

13           On page 2-25, the incredible comments are made that  
14 dioctyl phthalate--which isn't called that, it has some other  
15 name which is dioctyl phthalate, though--is described as the  
16 most prominent volatile organic contaminant of the 881  
17 Hillside. DOP is not particularly volatile. I don't know  
18 why they call it that, but DOP is principally used to test  
19 HEPA filters. That's why it's being found in 881. Is it  
20 possible that someone was--I don't even want to know how to  
21 use the adjective--blatant enough to bury spent HEPA filters  
22 in that hillside? If so, that hillside, whether your tests  
23 show it or not, is probably grossly contaminated with  
24 plutonium and I'd like to be reassured on that matter.

25           I'm an engineer. When I show diligence--and this

1 is a piddling expenditure. It's a \$3 million capital  
2 expenditure. If I were showing diligence and took 18 months  
3 to put it in, I'd leave the field with my tail between my  
4 legs. If it were a \$300 million expenditure, maybe showing  
5 diligence it could be done in 18 months. It is not showing  
6 diligence to do it in 18 months, plus the fact, it's spending  
7 money at the rate of \$2 million a year, and someone mentioned  
8 a billion dollars as the cleanup cost, and I want to say I  
9 can divide two million into a billion. We'll spend 500 years  
10 on this job.

11 MR. RICHARDSON: Let me interrupt for just a  
12 moment, Mr. Goldfield. Are you finished with your comments?

13 MR. GOLDFIELD: Yes.

14 MR. RICHARDSON: I'm up here, Mr. Goldfield.

15 MR. GOLDFIELD: I thought it was coming from there.

16 MR. RICHARDSON: I'm sorry.

17 MR. GOLDFIELD: Yes. Go ahead.

18 MR. RICHARDSON: Have you finished with your  
19 comment?

20 MR. GOLDFIELD: Yes, sir. Wait a minute, I want  
21 to--if I have time, I want to make one more. I have some  
22 comments of Gale Biggs. He makes a strong point that this  
23 area's contaminated with plutonium and we recommend  
24 tremendously, strongly that any excavation that's done be  
25 done under cover, and if you people are interested, I can

1 sell you a building made out of frames of aluminum and  
2 covered with very heavy textiles similar to an aluminum  
3 reinforced tent that can be moved from spot to spot as  
4 excavation takes place, and with the proper exhaust equipment  
5 we should be able to keep the neighborhood from being  
6 contaminated with plutonium particles.

7 MR. RICHARDSON: Mr. Goldfield, if you would like  
8 your comments to be introduced into the record, the  
9 additional comments that you didn't have a chance to get to,  
10 bring them up here and I'll introduce them as an exhibit.  
11 The two-page document entitled, "Notes on Proposed Interim  
12 Measures/Interim Remedial Action Plan, 881 Hillside,"  
13 submitted by Mr. Joe Goldfield will be admitted as Exhibit 3  
14 to this proceeding.

15 The next scheduled commenter is Bini Abbott.

16 MS. ABBOTT: My name is Bini Abbott. I live at  
17 9190 Alkire Street, Arvada, on the west shore of Standley  
18 Lake, a little more than a mile from the boundary of Rocky  
19 Flats.

20 MR. RICHARDSON: Ms. Abbott, will you be  
21 introducing your material there as an exhibit?

22 MS. ABBOTT: Not in leaving it, but I want you to  
23 see it.

24 MR. RICHARDSON: Okay. Well, then if you're going  
25 to be referring to it, be as descriptive as you can in terms

1 of the map because we're having this transcribed and would  
2 like to get the substance of your remarks as best we can.

3 MS. ABBOTT: All right. I have three main comments  
4 and first is on your inaccurate measuring of distances from  
5 Rocky Flats to the neighboring communities. In the first  
6 place, on page 2-5, you're talking about surround land use  
7 and you state that the nearest educational facility is the  
8 Sierra Elementary School, which is six miles southeast of  
9 Rocky Flats Plant. If you look at the map, Sierra School is  
10 the red dot way over here. That is not the nearest school.  
11 Sierra was built about 18 years ago. However, nine years ago  
12 Witt Elementary was built, which is about four miles, three  
13 and a half miles from the boundary of Rocky Flats. Standley  
14 Lake High School is closer. Lucas Elementary was just built.  
15 Moore Junior High was built in 1980 and is also closer to  
16 Rocky Flats.

17 I also feel that you should not measure from the  
18 center of the Rocky Flats Plant any more than you would  
19 measure from the center of a beehive that is a half-mile by a  
20 half-mile, and then say the only danger is coming from the  
21 very center of the beehive. You need to, I think, measure  
22 from the Rocky Flats boundary when you're stating what is  
23 close. We live way closer than any of your maps show.

24 On that same page, page 2-5, you talk about some of  
25 the plants that are near Rocky Flats and you have omitted

1 floral products, which has had two fires and produced a lot  
2 of problems, also. Then your bottom paragraph is ridiculous  
3 in my estimation. You're talking about agricultural  
4 statistics in 1976. Why would we care how many pigs and so  
5 on there were in 1976 in the area? You could get updated  
6 information.

7           You also have a map, which is Figure 2-3, but not a  
8 page number, and it's talking about land use in the vicinity  
9 of Rocky Flats Plant. It was taken after a Rockwell  
10 International map done in 1986. Who knows what they took  
11 their map from, maybe something done prior to then. It is  
12 absolutely inaccurate on where there's industry, where there  
13 are housing areas, and it should be updated.

14           How can we have faith in your credibility when you  
15 can't even put the background information down accurately?  
16 I'm aware that the chemists and so on who are doing the other  
17 reports did not do this part, but this is sloppy and should  
18 not be left that way.

19           Those really are my only comments. I won't pretend  
20 to do the technical part because I'm ignorant about it and  
21 wouldn't know, but I do think that you must measure  
22 accurately as the plutonium flies from the boundaries of  
23 Rocky Flats.

24           Thank you.

25           MR. RICHARDSON: Thank you for your comments.

1           The next scheduled commenter is Barb Moore. I'd  
2 like to remind the group that if you'd like to comment this  
3 evening, please register to comment at the registration  
4 tables to my left. If you would like to comment but don't  
5 feel like coming forward and commenting publicly, you can do  
6 so in writing at addresses that are available at the  
7 registration desks.

8           Sorry to interrupt, Ms. Moore. If you'd please  
9 precede your comments with your mailing address?

10           MS. MOORE: I'm Barb Moore, [REDACTED]  
11 [REDACTED] [REDACTED]

12           I just have a few objections to the remedial action  
13 plan. I have a problem with that there is no provision for  
14 extracting plutonium from the water. I understand that now  
15 that has not shown up, but what is going to happen if it does  
16 show up? Do we have a plan for that? I think it is--should  
17 be planned for. I think it is likely that plutonium could  
18 show up with the amounts of plutonium that have been released  
19 on Hillside 881. I think that should be planned for.

20           I'd like to know how the cleanup of the cleanup  
21 operations are going to be handled. Are the French drains  
22 and all this piping going to be left in place afterwards, or  
23 is it going to be cleaned up? And if it's going to be  
24 cleaned up, how is that going to happen?

25           And what if the water does not prove to be safe

1 that you are extracting? Do we have facilities to store this  
2 water? If so, where is that going to be stored? I  
3 understand that we are going to reach our capacity in the  
4 springtime. This cleanup operation isn't happening for  
5 another year. Where are we going to store this extracted  
6 waste and the water should it become necessary?

7 I understand there's, you know, from what I've been  
8 able to figure, over 50,000 square feet of contaminated land  
9 area on Hillside 881. I have a real problem with heavy  
10 machinery driving over this area and resuspending the  
11 particles into the air. During past cleanup operations air  
12 monitoring levels, plutonium levels have reached the state  
13 standards and, at times, have exceeded the state standards.  
14 What air monitoring is going to happen during the cleanup and  
15 at what point will cleanup stop should we exceed those air  
16 monitoring standards?

17 I am confused that this plan has come about, in my  
18 eyes, fairly rapidly. In last February, 1989, Troy Wade, in  
19 testimony before a Senate hearing, was telling us that Rocky  
20 Flats could never be--may never be cleaned up. When Senator  
21 Tim Wirth asked him about the ground water contamination,  
22 Wade acknowledged that the technology does not exist for  
23 cleaning up the ground water or stopping the contamination.  
24 I want to know, you know, what drastic measures have occurred  
25 since February, 1989, to make this now a safe and feasible

1 plan?

2 At the last meeting here at Front Range Community  
 3 College, I may have misinterpreted the comments, but the way  
 4 I interpret it is that because of strong public objection,  
 5 may delay the cleanup of the ground water on Hillside 881,  
 6 would be the fault of the people that are objecting. I say  
 7 that would be the fault of the people who drafted the plan.  
 8 We need to have a plan that is acceptable to the public and  
 9 that will not endanger our health. I think our priorities  
 10 should lie with the people and the public safety, and not  
 11 with how many dollars this is going to cost us to clean this  
 12 up.

13 I want to thank you for your time.

14 MR. RICHARDSON: Thank you for your comments, Ms.  
 15 Moore.

16 We'll take one more commenter before our break.  
 17 The next commenter is Mel Wright. As Mr. Wright is coming  
 18 forward, I remind you that if you'd like to comment you may  
 19 sign up to do so at the registration tables at the doors to  
 20 my left.

21 Welcome, Mr. Wright. If you would precede your  
 22 comments with your mailing address?

23 MR. WRIGHT: Okay. My name is Mel Wright. I'm an  
 24 environmental chemist with General Electric, but representing  
 25 myself and concerned citizens; [REDACTED] [REDACTED] [REDACTED]

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1 to come out. You were going to test it. If it failed the  
2 test you were going to pump it back in, in line, and I some  
3 ways it almost sounds like dilution. I'd rather see you set  
4 up another second set of either the ozone treatment or some  
5 more carbon filters. Possibly put some secondary backup  
6 systems; in other words, if you have breakthrough, don't re-  
7 send it back through kind of as a dilution scheme, but go on  
8 down the line.

9 I'm just going to keep it at that for your  
10 comments, and some comments to my concerned citizens. First,  
11 even though this is an interim cleanup, hopefully you're  
12 going to follow the OSHA rules. 1910.20, it very well  
13 defines exactly what these guys have to do, how they monitor,  
14 what kind of equipment the people have to wear, what kind of  
15 dust they can stir up, and all you have to do is you can call  
16 up OSHA and ask for 1910.20. It'll tell you everything you  
17 want to know about what these guys have to do. Hopefully,  
18 you will follow it.

19 Okay. Even though it's an interim cleanup, by law,  
20 a lot of times if you're doing interim, EPA allows you to  
21 bypass or not follow a lot of the rules that a Super Fund  
22 site would, or a normal cleanup facility would. Hopefully  
23 you're going to follow 1910.20, and I highly suggest  
24 everybody in the audience call up OSHA and ask for that  
25 paper, and it will answer--there was about three people who

1 had questions about that. It will answer all your questions.  
2 All you've got to do is ask these guys are they going to  
3 follow that.

4           Let's see, the second thing, I'm concerned that it  
5 seems like the major concern of the audience is, "Let's don't  
6 do anything. We'll just leave it there." My complaint is,  
7 we've put it there. It's there in concentrated form. Let's  
8 get rid of it. You guys are worrying about stirring up a  
9 little dust. What do you think wind storms do? What do you  
10 think--where does the rainwater go? It washes off the  
11 property. You guys are probably more contaminated by what  
12 the wind blows up, what the rainwater washes off than these  
13 guys will ever stir up. Hopefully they will reduce it, you  
14 know, put up--hopefully, you'll take this one guy's comments,  
15 maybe put a dome over it, a simple, cheap dome. You'll water  
16 it down, do everything possible to reduce it, but you know  
17 and I know as an environmental chemist, these guys are more  
18 at risk from what the environment is throwing out to them  
19 than you guys will stir up in the cleanup.

20           We've got to start trying to remove something. If  
21 you leave it there, it's a time bomb and it will get you. So  
22 my comment is, first, I appreciate that we're going to try  
23 something, work it out, realizing it is an experiment, but  
24 hopefully intelligence allows some thought to go into it.  
25 You work at it, you improve it, but at least do something.

1           Again, send away for the information and let's try  
2 and work together. I want to protect my life and my  
3 environment, and the way to do it is to help people solve the  
4 problem and understand it. So send away for the literature  
5 and go from there. Remember, the ozone thing doesn't work on  
6 the carbon tet, and that's it. Thank you very much.

7           MR. RICHARDSON: Thank you for your comments.

8           At this point we're a little behind schedule, but  
9 we're scheduled to take a break. We'll take a short ten-  
10 minute break now.

11           (Whereupon, a ten-minute break was taken.)

12           MR. RICHARDSON: We're back on the record now. I  
13 have a couple of housekeeping items I'd like to take care of  
14 before we call the next commenter. I'd like to introduce  
15 into the record of this proceeding as Exhibit No. 4 the  
16 prepared comments of Joe Tempel, two-page comments entitled,  
17 "Comments on the Interim Remedial Action for 881 Hillside,"  
18 dated November 9, 1989; introduce into the record of this  
19 proceeding as Exhibit No. 5 the prepared comments of Paula  
20 Elofson-Gardine, one-page comment entitled, "Comments on the  
21 Proposed 881 Hillside IRA," on Rocky Flats Cleanup Commission  
22 letterhead.

23           As Exhibit No. 6, I'm introducing into the record  
24 of this proceeding as Exhibit No. 6 the prepared written  
25 comments of Greg Marsh, entitled, "Comments on the 881

1 Hillside Volume I Draft," on Rocky Flats Cleanup Commission  
2 letterhead; introducing into the record of this proceeding as  
3 Exhibit No. 7 the prepared comments of William Kemper,  
4 entitled, "Comments of W.A. Kemper on Interim Remedial Action  
5 Plan, 881 Hillside Area, October, '89," on Rocky Flats  
6 Cleanup Commission letterhead.

7 Introducing as an exhibit of this proceeding as  
8 Exhibit No. 8 the prepared written comments of Gale Biggs  
9 entitled, "Air Quality Assessment for Inclusion in TAG  
10 Comments, Public Hearing on Hillside 881," dated November 6,  
11 1989 on Rocky Flats Cleanup Commission letterhead.

12 Introducing into the record of this proceeding as  
13 Exhibit No. 9 the prepared written comments of Joe Goldfield,  
14 two-page written comments entitled, "Notes on Proposed  
15 Interim Measures/Interim Remedial Action Plan 881 Hillside,"  
16 on Rocky Flats Cleanup Commission letterhead.

17 Introducing into the record of this proceeding as  
18 Exhibit No. 10 the prepared written comments of Kim R. Grice,  
19 nine pages entitled, "Comments on Proposed Interim Remedial  
20 Action Plan at Public Hearing on Hillside 881," dated  
21 November 9, 1989, Kim R. Grice.

22 Introducing into the record of this proceeding as  
23 Exhibit No. 11, a document entitled, "Community  
24 Questionnaire, Rocky Flats Plant," submitted by Patrick  
25 Etchart; seven pages with attached envelope.

1           Introducing into the record of this proceeding as  
2 Exhibit No. 12 a prepared written document submitted by  
3 Patrick Etchart entitled, "Community Relations Work Plan  
4 Submitted to EPA, Region VIII by the Department of Energy,  
5 Rocky Flats Office," dated October 28, 1989, a seven-page  
6 document.

7           Introduced as Exhibit No. 13 in the record of this  
8 proceeding the prepared written comments of Mayor George  
9 Hovorka entitled, "Testimony of Mayor George Hovorka."

10           Being from Boise, I didn't think other major  
11 metropolitan newspapers made errors, but I was asked to  
12 announce that the article in today's Rocky Mountain News, on  
13 page 28 contained an error on the date for the hearing on the  
14 Rocky Flats Hazardous Waste Permit and Notice of Intent to  
15 Deny. The Rocky Mountain News reported that the hearing is  
16 tomorrow evening. In fact, the hearing is Tuesday, the 14th.  
17 I understand they will be printing a retraction, probably in  
18 the last page of the want ads.

19           Another notice I've been asked to note for your  
20 information is that on November 13 at 8:30 in the Registry  
21 Hotel at 3203 Quebec Street in Denver will be the Secretarial  
22 Panel for the Evaluation of Epidemiologic Research Activities  
23 for the Department of Energy. Those are not exhibits to this  
24 proceeding.

25           The next scheduled commenter is Steve Reynolds.

1 Mr. Reynolds, I'm not sure if you were here before the break.  
2 We give our commenters five minutes to comment, and I will  
3 rudely interrupt you at five minutes to let you know that  
4 your time has lapsed. At that time, I would ask that you  
5 bring your comments to closure.

6 If anyone else here would like to comment this  
7 evening, please register at the registration tables as Mr.  
8 Reynolds is my last registered commenter for now. If we  
9 don't have another commenter, we will be at ease until  
10 another person signs up. We'll be here until ten o'clock, as  
11 the notice stated, to see if anyone here gets off work late  
12 and needs to come and make their comments.

13 Mr. Reynolds, sorry to interrupt you.

14 MR. REYNOLDS: Thank you. You don't have to worry  
15 about time. I just had a couple of questions. I did arrive  
16 late, so I might be asking a question that has been asked  
17 previously, so I apologize, but I'll keep it very brief.

18 My concern is--one is resuspension and on-site and  
19 off-site Hill 881, as well as some of the areas that I've  
20 been told about that have a fairly high radioactivity just  
21 east of Indiana. Is there any particular reason why we  
22 couldn't be using some of the adhesive sprayed currently in  
23 some of the core sample sites or some of the core sites to  
24 keep the resuspension down on this area, which is only about,  
25 what, a mile and a half, two miles from a major high school

1 that was just fairly recently built and a very large  
2 population in that area. Is there any particular reason why  
3 we couldn't be putting something down to keep that down? I  
4 understand that they're taking measures to, I've been told,  
5 plow under as well as re-vegetate, but some of this adhesive  
6 material that I've read about that they've been spraying in  
7 these areas for the core samplings have been used, and why  
8 not use it there?

9           Also, in the--this may not--I may be out of order  
10 in asking this question, but with the recent accident  
11 yesterday of this plane at 108th and Wadsworth, and earlier  
12 this year the aircraft accident and previous to that, the air  
13 show which we had a large number of aircraft, is there--  
14 especially now with the--all these boxcars out there and the  
15 high potential of--or high exposure I'd suggest that we've  
16 had probably prior to the--and I think you call it the EPA's  
17 evaluation of accidents. I don't know if that was considered  
18 at that time; that is, all the boxcars we have out there now.  
19 But is there any consideration in the remedial time of  
20 looking at redirecting traffic or--and I don't know how you  
21 do that with a major airport right next to it, but on the  
22 other hand, is that being considered? And if it's not, I'd  
23 sure appreciate it if it would be.

24           And likewise, on on-site areas like 881, what is  
25 being done for resuspension again?

1 Thank you.

2 MR. RICHARDSON: Thank you for your comments. If  
3 anyone would like to submit written comments, you have until  
4 November 27 to submit written comments. That's a received  
5 date. To be assured consideration, the Department must  
6 receive those comments by November 27th. If you know of  
7 someone, you have a friend or neighbor who didn't have a  
8 chance to make it this evening, who would like to comment,  
9 the address is on the registration tables at the entrances.  
10 Please take it. There's a number of flyers there with the  
11 address on it. Please take them home and provide them to the  
12 people who you know who would like to submit written  
13 comments.

14 We don't have anyone else who is registered this  
15 evening to comment, so we will be at ease pending call of the  
16 Chair.

17 (Off the record.)

18 MR. RICHARDSON: We're back on the record.

19 At this time I'd like to introduce as Exhibit No.  
20 14 of this proceeding the prepared written comments of Dr.  
21 Niels Schoenbeck, entitled, "Metropolitan State College  
22 Chemistry Professor, Member of Governor's Rocky Flats  
23 Environmental Monitoring Council, Details of the French  
24 Drain."

25 It is now 9 p.m. No additional commenters have

1 registered at the door. I'll ask if there's anyone in the  
2 audience who has not had a chance to register to comment, but  
3 who would like to do so. If you have not had a chance to  
4 register to comment and would like to do so, please come  
5 forward now.

6 (No response.)

7 MR. RICHARDSON: I'll note for the record that no  
8 one has come forward, that the auditorium is practically  
9 empty.

10 At this point we will go off the record and I will  
11 note for the record that we will have a representative of  
12 Rockwell International and the Department of Energy in the  
13 room until 10 p.m. in case an additional person shows up who  
14 would like to comment, who will be provided an opportunity to  
15 do so in writing. At this point we are off the record and  
16 this meeting is concluded.

17 (Whereupon, the meeting was concluded.)

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CERTIFICATE

This is to certify that the attached proceedings before:  
UNITED STATES DEPARTMENT OF ENERGY

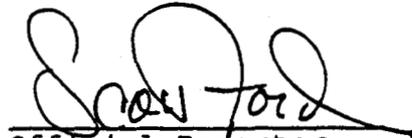
In the matter of:

PUBLIC MEETING ON PROPOSED INTERIM MEASURES/INTERIM  
ACTION PLAN AND DECISION DOCUMENT 881 HILLSIDE AREA

At: Denver, Colorado

Date: November 9, 1989

were held as herein appears, and that this is the original  
transcript thereof for the file of the Department.



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