



**ADMINISTRATIVE RECORD
FOR THE MADISON SITE
MADISON, ILLINOIS**

Community Relations-

Proposal to Clean Up the Site at Madison, Illinois - Public Meeting Transcript



**US Army Corps
of Engineers
St. Louis District**

1 United States Army Corps of Engineers
2 St. Louis District
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7 Proposal to Clean Up the
8 Site at Madison, Illinois
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13 Public Meeting
14 February 17, 2000
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1 United States Army Corps of Engineers
2 St. Louis District
3 Proposal to Clean Up the
4 Site at Madison, Illinois
5

6 Transcript of Proceedings
7 Be it Remembered, that on the 17th day of February,
8 2000, a public meeting was held on the above-entitled
9 matter at the City Hall, 615 Madison Avenue, in the City
10 of Madison, State of Illinois.
11

12 Present
13 Major Emmett Wood, Deputy Commander
14 Ms. Sharon Cotner, Program Manager
15 Ms. Jacque Mattingly
16 Jim Moos, Industrial Hygenist
17 Debbie McKinley, Lead Engineer
18 Dennis Chambers, Health Physicist
19 Lou A. Dell'Orco, Project Manager
20 Bill Levins, Attorney
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1 MJR. WOOD: Good evening everybody. I think
2 we've got a quorum. It looks like we've got all we're
3 going to get.

4 My name is Major Emmett Wood. I'm the Deputy
5 Commander of the St. Louis District here for the Corps of
6 Engineers and I'm here representing the Corps, of course.
7 I'm also representing my boss, Colonel Mike Morrow, who
8 is actually with his family this weekend. So I have the
9 pleasure of being here with you tonight to talk to you
10 about the Madison FUSRAP site in this our public
11 meeting.

12 Okay. Here's our agenda. I'll go over some ground
13 rules about the way things will work tonight and I'll
14 give you our -- every time we do a briefing we have this
15 obligatory slide over here. And we have to talk about
16 our headquarters, so I'll talk about that for about a
17 minute or so. And then we'll move on past that, look at
18 objectives of the FUSRAP project, and then I'll just let
19 you read the rest of that.

20 Anybody who can't see that? There's seats, a couple
21 seats up front where you can move closer.

22 Okay. Okay. We're going to have a verbatim record
23 of the proceedings this evening. And everyone was able
24 to pick up a copy of this presentation when they came in.
25 If you don't have one now, you can get one before you

1 leave.
2 Save your questions for the Q and A so that we can
3 have the folks that we've assembled here who are resident
4 experts and the people who have been running our FUSRAP
5 program since we took it over from DOE. Hopefully, we'll
6 give you some thoughtful answers tonight or at least
7 point you in the right direction.

8 Use the podium to make your statements and ask your
9 questions. And we want to have everybody have an
10 opportunity to speak, so I'd ask that, or we would ask
11 that we give one another the courtesy of getting
12 everything out and avoiding interruptions so that
13 everybody can get their sort of complete thought out on
14 the table.

15 And if you've got written comments that you want to
16 submit, we'll also take those, and those will also become
17 a part of the public record of the meeting.

18 Now, here's the obligatory slide. The St. Louis
19 District is one of six districts in what's known now as
20 the Mississippi Valley Division. It goes all the way
21 from the Canadian Border down to the Gulf of Mexico. And
22 there we sit, smack in the middle. And that's our short
23 obligatory press release here.

24 Okay. Here are the objectives of the FUSRAP
25 program. We want to find the sites and evaluate them for

1 what needs to be done. We want to clean and maintain
 2 them to the guidelines that are required, that are
 3 mandated. We want to dispose of any bad stuff that's
 4 there, and we want to stabilize any contamination that
 5 may be found in a manner that's safe and not going to
 6 cause any further problems to anyone else.

7 Naturally there is state, federal, and local laws
 8 that have to be complied with and there's more acronyms
 9 than you'd care to think about in alphabet soup. There's
 10 CERCLA and RCRA and all kinds of stuff with which we have
 11 to comply. And in the end, what we want to have is a
 12 location that we can certify for some future use of some
 13 sort.

14 And I think, Sharon, this is -- actually I think the
 15 last one was yours too.

16 MS. COTNER: That's okay. I'm not going to
 17 complain.

18 MJR. WOOD: Go ahead.

19 MS. COTNER: Hi. I'm Sharon Cotner. I'm with
 20 the Corps of Engineers in the St. Louis District. And I
 21 am the Program Manager in charge of the FUSRAP project in
 22 St. Louis. We have basically five projects, four of them
 23 in Missouri. Most of them in North St. Louis City and
 24 North County. And the exception here is the Madison
 25 Site, which is over here in Illinois.

1 I am responsible for the program in general in terms
 2 of ensuring we have appropriate resources, the funding,
 3 and in general the way the program is run.

4 And what I'd like to do tonight is to run you
 5 through a little bit of history for the site. And
 6 combined on this slide between the history of the
 7 facility itself and the history of how the Corps of
 8 Engineers became involved in this, a little bit with the
 9 Department of Energy, and some of the other entities that
 10 are involved. And then take you through in a sort of
 11 synopsis version the Remedial Investigation that we've
 12 done, the Feasibility Study that we've done for this
 13 site, and Proposed Plan.

14 A lot of this is captured in the fact sheets that
 15 you have. If you've got a blue folder, you probably have
 16 a lot of this. You have a copy of my presentation if you
 17 wish to make notes on it. You also have a copy of the
 18 newsletter that we put out and some general fact sheets
 19 that are associated with this particular project.

20 If you look at the fact sheets in particular,
 21 something that might be helpful to you is on the back of
 22 one of the fact sheets, is an area of the plant. It's
 23 just a plan, view of the plant with some colored circles
 24 to indicate where the contamination is. And that might
 25 help you when we start talking about the facility

1 itself.

2 There are also copies of the Proposed Plan and I
 3 believe the Feasibility Study on the table out there. If
 4 there aren't any left, Jacque Mattingly here, the young
 5 woman here in the gray, she'll get you a copy if we've
 6 still got some extras left. And if not, we'll send one
 7 to you if you just let us know what you'd like to see.

8 Go back. Not ready yet. Oh, yeah.

9 From 1957 to 1962, Dow Chemical actually used a
 10 portion of the site to perform extrusions of uranium
 11 metal and straightening uranium metal rods for the Atomic
 12 Energy Commission.

13 What I'm going to try to do as I go through this, if
 14 you see some acronyms up there, I tried to take out most
 15 acronyms so that it's easy to follow.

16 The work was actually performed under a subcontract
 17 to Mallinkrodt. Mallinkrodt had become involved in
 18 support work for the Atomic Energy Commission and the
 19 Manhattan Engineer District associated with the
 20 development of the atomic bomb. And this was kind of an
 21 offshoot of that.

22 We don't know what the uranium rods were actually
 23 used for. It's still classified as far as we could find
 24 out. But we do know that they were involved in it. And
 25 that is basically the source of the contamination that

1 we're talking about.

2 In 1969 Dow leased the facility to help Dodge
 3 Aluminum. In 1973, Consolidated Aluminum Corporation
 4 assumed the facility's lease. In 1974, the Atomic Energy
 5 Commission actually identified FUSRAP sites and the
 6 program began.

7 For those that don't know, FUSRAP stands for
 8 Formerly Utilized Sites Remedial Action Program. Okay?
 9 What it is is the clean up of a lot of the Atomic Energy
 10 Commission work, contamination generated as Atomic Energy
 11 Commission's activities.

12 In 1977 the Department of Energy was actually
 13 created. The Atomic Energy Commission actually, just to
 14 give you a little bit of history, between 1974 and 1977
 15 was subdivided into NRC, Nuclear Regulatory Commission,
 16 and an agency called the Energy Research Development
 17 Agency. And that agency eventually became the Department
 18 of Energy.

19 In 1986 Barnes Acquisition purchased the plant, and
 20 it was owned and operated by the Spectralite Consortium
 21 ever since.

22 In 1989, three years later, Oak Ridge National
 23 Laboratory on behalf of the Department of Energy
 24 performed surveys on the plant for eligibility into this
 25 FUSRAP program.

1 In 1997 Congress transferred the FUSRAP program from
2 the Department of Energy to the Corps of Engineers. And
3 on October 13, much to our surprise, we received the
4 program.

5 In 1998 we performed some additional sampling and
6 surveying to better evaluate the radiological conditions
7 of the site. And I'm going to give you some of the
8 results and a little bit more information about the ORNL,
9 the Oak Ridge work, as well as the Corps of Engineers'
10 work in a moment.

11 And in 2000, which is where we are right now, the
12 Madison Remedial Investigation/Feasibility Study and
13 Proposed Plan have been issued to the public. And,
14 again, those are the two documents. The Remedial
15 Investigation and Feasibility Study is one document. The
16 Proposed Plan is the second document. And they are back
17 there on the table if you care to look at them.

18 As I mentioned just a moment ago, Oak Ridge National
19 Laboratory actually conducted the first study out here,
20 the first survey in 1989.

21 Their objective was to determine if uranium and the
22 contamination in the facility exceeded Department of
23 Energy guidelines. Basically what they were trying to
24 find out is whether this particular site should be
25 incorporated into the FUSRAP program, into their remedial

1 action program. And that's what their primary purpose
2 out here was.

3 They took twenty samples and several survey
4 readings. You don't need to take a sample to run the
5 survey equipment over it to find out if you have some
6 sort of levels of contamination.

7 The concentrations they actually came up with were
8 between, were within a range. Their highest contaminant
9 that they found was one sample of six hundred and
10 thirty-five picocuries per gram. Their lowest was
11 eight.

12 And, again, for those - I've tried to minimize the
13 technical jargon in here so that you don't have to have a
14 Ph.D. in radiochemistry to understand what's going on
15 here.

16 PicoCuries per gram is a typical measurement for
17 contamination in soils and dust, which is basically what
18 we've got here. So it's just kind of a unit measure, if
19 you will.

20 Their conclusions were that they did find
21 contamination that was detected above their guidelines,
22 and, therefore, the program, this particular site should
23 be included into the program.

24 They also concluded that additional investigation
25 was required in Buildings 4 and 6. Now, the basis for

1 the Buildings 4 and 6 was one of the things that you
2 typically do when you're looking at a site such as this,
3 is you go back and you look at the historical documents
4 and historical records. You see exactly where activities
5 occurred that could cause some sort of contamination.
6 When they went back and looked at all the historical
7 records, what they found was that the only places where
8 this type of activity, this uranium extrusion, occurred
9 was in Buildings 4 and 6. And that's what they focused
10 on.

11 In 1998 after the Corps of Engineers assumed the
12 program, we also did another survey of the Madison
13 facility. We had access to the Department of Energy's
14 results, and we decided to come back out here and to do
15 some additional sampling to determine more accurately the
16 nature and extent of contamination.

17 What we did was we took eighty-two samples. Of the
18 eighty-two samples, sixty-two were actually for dust,
19 ten were actual soil samples on entrances and exits from
20 the building. Just in case something got tracked out of
21 the building, we went and looked there to see that
22 nothing left the building. And then ten of the samples
23 were from the floor and the sludge pits to make sure that
24 we got as much covered as we could to make sure that we
25 knew where any location of where this contamination could

1 have spread.

2 What we found were concentrations of uranium from
3 four to three hundred and sixty picocuries per gram. And
4 again, that picoCurie per gram is the typical measurement
5 for this type of contamination.

6 We found it essentially on the horizontal surfaces
7 of beams. If you've seen some of the photos out in the
8 lobby area and the first photo on here, and if you're
9 familiar with the Spectrolite facility, the Madison
10 facility, you realize there are a lot of very high
11 overhead beams. That's where we actually found the dust.

12 And if you look on the back of that one fact sheet,
13 you can see that there's a little map there with the
14 colors that are coded. And that shows how the
15 contamination spread out from the exact place where the
16 particular piece of equipment was located.

17 Again, we found the contamination is limited to
18 portions of Buildings 4 and 6. We only found the
19 uranium. We did check for others.

20 We concluded as a result of this survey, as a result
21 of the sampling, that an assessment of risk would be
22 appropriate for this facility and, therefore, we should
23 go on to the next step. And that we should ultimately
24 proceed based on the risk, once we've assessed the risk,
25 that it was appropriate to develop alternatives for

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1 remediation and actual feasibility study.
 2 Again, the purpose of the remedial investigation was
 3 to gather data to determine if we had a need to actually
 4 formulate alternatives. Okay?
 5 What I'd like to do now is go off a little bit on
 6 the assessment of risk and how we determined that we
 7 needed to move forward with the Feasibility Study. Just
 8 sort of a little background information on what I'm
 9 talking about when I'm talking about risk. A risk
 10 assessment analyzes potential adverse health effects,
 11 current and future, due to a hazardous substance release.
 12 Okay? These are nice words, but what does it mean? What
 13 are you actually doing?
 14 What you look at is the exposure. The first thing
 15 you're going to look at is who is exposed to this, who is
 16 in this area, okay? Are we talking about a utility
 17 worker, are we talking about a factory worker, are we
 18 talking about an area accessible to the general public?
 19 You have to identify the types of people that could be
 20 exposed to this particular contaminant.
 21 What you do after that is you look at the pathways
 22 for exposure. Now, generally there are four pathways for
 23 exposure. You either inhale it; you would eat it, you
 24 ingest it; you absorb it through your skin; or you inject
 25 it. And I'm not just talking needles, I'm talking about

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1 sharp pieces of metal and you puncture your arm or
 2 puncture your foot. If you stepped on a nail, you've
 3 injected it.
 4 So what we did is we looked at the pathways of how
 5 this contaminant could get into people and affect them.
 6 And then we estimate contaminant intake. In other words,
 7 we know our people, we know what kind of a pathway is the
 8 most likely to affect them, and we then look on, look at
 9 the contaminant intake. In other words, how long are
 10 these people going to be there? How often are they
 11 there, for what kind of a period of time?
 12 You know, are they only there once a year for five
 13 hours, or are they working in this area eight hours a
 14 week or ten hours - I mean, eight hours a day or ten
 15 hours a day. We look at that kind of analysis, and we
 16 develop scenarios based on this.
 17 Then we look at the toxicity. And we base this on
 18 existing toxicity information. Okay? It's industry
 19 information; it's not government. It's what applies to
 20 the private sector as well as the federal sector.
 21 And what it does is it considers the effect or the
 22 relationship between the magnitude of exposure and any
 23 kind of adverse effects. So, in other words, what health
 24 effect, what health impacts are the result of being this
 25 person, doing whatever this is, whether it's ingesting it

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1 or inhaling it or whatever, and doing it for this period
 2 of time. And we develop an analysis and we analyze
 3 that.
 4 And that's what happens when we do the actual risk
 5 characterization. We take these components, we pull them
 6 together and look at it, and we say, well, do we have a
 7 problem, are we putting people at risk or not. And
 8 that's what we've done here for the Madison facility.
 9 We looked at two scenarios, at least two initially.
 10 We looked at the facility worker, the person who was
 11 actually on the floor level. And we made an assumption.
 12 And what you typically will do is you tend to be on the
 13 somewhat conservative side.
 14 We assumed that that person was on that floor eight
 15 hours every day, two hundred and fifty days a year,
 16 assuming they have vacations and assuming they have
 17 holidays, for twenty-five years straight. And we
 18 calculated what the risk to that person was.
 19 We also looked at a utility worker. Again, we
 20 looked at a worker who happened to go into Buildings 4
 21 and 6 and had to go up on those overhead beams and
 22 replace a light bulb or run some sort of cabling. We
 23 looked at that person also. And we assumed they were
 24 going to be up there twenty hours a year on average
 25 changing light bulbs. And they were going to do it for

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1 twenty-five years straight. Okay?
 2 So that's, that's our exposure scenario. Those are
 3 our calculations and how we thought how long they were
 4 going to be up there.
 5 Then if you remember what I just talked about, the
 6 pathways. What we assumed was that ninety-nine percent
 7 of their dose would come through inhalation of the
 8 uranium. And inhalation is probably one of the worst
 9 ways to get it because it goes right to the lungs and to
 10 the internal organs. Okay? So you've got a higher risk
 11 there. We assumed that ninety-nine percent of this was
 12 going to go in that way.
 13 We also assumed that all of the material would be
 14 disbursed in the air over the twenty-five-year period
 15 they were there. Okay? If you've been at the facility,
 16 what is there has not become disbursed. Okay? It's not
 17 being sprayed all over the place. So this is probably a
 18 very conservative assumption, okay? But we assumed it,
 19 the worst case scenario.
 20 And here's what we basically found. What we found
 21 was that there are acceptable and unacceptable risks.
 22 And the facility worker was not at an unacceptable risk.
 23 He was within a normal risk range for being impacted.
 24 What we found for the utility worker was he was not; he
 25 was at risk. And that became our driver for how we

1 developed all of our alternatives and how we proceeded
 2 with selecting which alternative we thought would be
 3 preferred.

4 This is, this is in accordance with CERCLA, which is
 5 basically how this whole process is proceeding. Since
 6 the program was transferred from the Department of Energy
 7 to the Corps of Engineers, we follow CERCLA procedures;
 8 we don't follow DOE procedures.

9 Okay. So what happened? We decided to proceed with
 10 a feasibility study. And basically what a feasibility
 11 study does is it selects the applicable or relevant and
 12 appropriate requirements. As you hear them, if you know
 13 the terminology, you hear them referred to as ARARs.
 14 ARARs are basically the state, the local, federal
 15 regulations that have been promulgated that are
 16 appropriate for consideration or appropriate and -- or
 17 relevant and appropriate -- applicable or relevant and
 18 appropriate to this particular type of an action. So
 19 they are basically the laws and regulations that we have
 20 to comply with.

21 It evaluates whatever alternatives you generate to
 22 achieve those ARARs. You look at them and say, okay, how
 23 are these alternatives in comparison to each other?
 24 Which ones are more effective? Which ones have other
 25 risks associated? You look at all of them, and you

1 select one of those alternatives using the nine
 2 evaluation criteria that are identified in CERCLA.
 3 Okay?

4 And here are the nine criteria. Now I'll let you
 5 read them for a moment.

6 Okay. The first one, which is of no surprise, is
 7 the overall protection of human health and the
 8 environment. Whatever we do here it has to be
 9 protective. We cannot cause a greater problem than what
 10 we are trying to fix. We have to be compliant with those
 11 laws and regulations. Those are two biggies.

12 The next thing is the short-term effectiveness,
 13 long-term effectiveness, and permanence. We don't want
 14 to go in there and do something and then have to come
 15 back later and do it again if it doesn't work. Typically
 16 what you try to do is to reduce the volume or the
 17 toxicity or the mobility through some sort of treatment.
 18 And removal in this case is considered a treatment.

19 Implementability. In other words, can it
 20 technically be done. We all like to make any kind of
 21 radioactive contamination totally disappear.
 22 Unfortunately the technology isn't there. So that as an
 23 alternative would not be implementable. So whatever we
 24 take has to be implementable.

25 Cost is a factor also.

1 And the last two factors there are the state
 2 acceptance and the community's acceptance. And that's
 3 what, in part, brings us here tonight.

4 What we try to do is to consider and coordinate with
 5 the state as we move through the process, the feasibility
 6 study and post-planning process, as well as to reflect
 7 community and what their concerns and their issues are
 8 also. But the formal means for doing that is this
 9 meeting tonight and the public's review and your
 10 submittal of comments, written, oral, whatever, on these
 11 documents. That will give us the formal process, the
 12 formal closure for this state acceptance and the
 13 community acceptance.

14 And those are the criteria that we used in
 15 evaluating the alternatives that we've got in this
 16 particular plan.

17 Okay. What is our purpose here? Our cleanup
 18 criteria for the Madison site are driven essentially by
 19 the Nuclear Regulatory Commission's 10 CFR 20 Subpart E.
 20 And basically the rest of this is what that subpart says.

21 Cleanup and control must achieve twenty-five
 22 millirems per year and that's a dose. If all of the
 23 controls are lost, in other words, you can achieve this
 24 twenty-five millirem per year by limiting access, by
 25 putting deed restrictions on the property, whatever,

1 those are called controls, institutional-type controls.
 2 If those are lost for whatever reason, the dose cannot
 3 exceed one hundred millirem per year. Okay? Those are
 4 the two key things to factor in on.

5 In all instances, though, the dose must be as low as
 6 reasonably achievable. And that drives us a lot in how
 7 we proceed in the cleanup. And what we have to do
 8 basically because, it's very difficult to measure a dose
 9 in the field, is we translate that dose, as a tool for
 10 our construction for our field work, into picocuries per
 11 gram, that measurement that I mentioned earlier. And
 12 when we translate twenty-five millirem into picocuries
 13 per gram, it comes out to the cleanup criteria of about
 14 twenty picocuries per gram. And that's where we go after
 15 it. That's the cleanup criteria that we use to decide
 16 what areas we go after to remove this dust.

17 What we did was we developed four alternatives to
 18 accomplish this type of a cleanup.

19 And I have to preface the first one, I always put,
 20 it's required by CERCLA for comparison, the no action
 21 alternative. We have to always identify it as an
 22 alternative. Most people don't like it but it's a
 23 requirement. So that's why it's up there.

24 Institutional controls. Again, if you can implement
 25 institutional controls to such a degree that you don't

1 have to clean anything up. That becomes an alternative
2 in and of itself.

3 The third one is containment. And the fourth one is
4 decontamination of the accessible areas.

5 The next couple of slides are basically short
6 synopses and descriptions of these four alternatives.

7 Alternative 1 is a no action alternative. Again,
8 you just leave everything in its current state. There
9 really basically is no cost associated with it. Sort of
10 a do nothing approach.

11 Alternative 2 is institutional controls. There's a
12 cost of about sixty thousand dollars associated with
13 that. Basically it's providing work instructions,
14 protective measures, reducing exposure in whatever manner
15 you can, and training, that sort of thing.

16 The third alternative is containment. And
17 containment in this case, due to the fact that we're
18 talking about dust on beams, is essentially spraying a
19 coating that would adhere to the surfaces and basically
20 trap the dust inside of it and prevent the dust from ever
21 moving anywhere, from being inhaled or from coming off in
22 any manner.

23 One of the things we do have to look at, however, is
24 what happens if the building for some reason becomes
25 vacated and the building becomes demolished. If we were

1 to implement the containment alternative, you would have
2 to decontaminate the building prior to demolishing,
3 because there would be a risk associated to the
4 demolition workers, which is a whole other one of those
5 scenarios. When I mentioned earlier that there were
6 other scenarios that we looked at, those are the other
7 scenarios. Is it a risk to somebody who is going to
8 demolish that building? Is it a risk to somebody who
9 recycles the metal in the buildings? Those were other
10 scenarios that we examined.

11 Alternative 4 is a decontamination of the accessible
12 surfaces. In this case it has a cost of approximately
13 two hundred and fifty thousand dollars and release of the
14 building. What it consists of is contamination on
15 accessible surfaces that would be removed to meet that
16 twenty-five millirem dose level that's driving this.

17 Difficult to access areas are those surfaces that
18 cannot be accessed by crane or by other means. There are
19 just some areas that it's darn near impossible to get to
20 in this particular facility.

21 Okay. So what did we do? Well, we evaluated all of
22 the criteria. And if you're interested in more on
23 exactly what that alternative evaluation involved, you
24 can pick up a copy of the Proposed Plan, which has a
25 short summary of it. And I think there might be also in

1 the fact sheets. If you really want to get into it, you
2 can pick up a copy of the Feasibility Study. It goes
3 into it in much greater detail.

4 But they were all evaluated against those nine
5 criteria, protectiveness and the permanance and all of
6 that.

7 And what we found and what we preferred was
8 Alternative 4. Okay. This alternative is presented in
9 that Proposed Plan. That's the one that's most heavily
10 discussed in that document.

11 And here's a quick description of what Alternative 4
12 consists of. Basically what you're talking about is
13 decontaminating by vacuuming, scraping, and scrubbing
14 those beams, so that the contaminant level and the dose
15 level is low, it's within an acceptable range. The
16 decontamination would take place when the building owners
17 make it available to us. Again, our preference is
18 probably for holidays and weekends and off times, if you
19 will.

20 We're talking about approximately fifty cubic yards
21 of material, of dust that we're talking about removing.
22 We're not talking about a whole, whole lot of material.
23 And what will happen to it is it will be taken off site
24 and disposed of at a properly licensed and permitted
25 landfill, disposal facility.

1 And, let's see, after the remedial action, a final
2 survey of the facility would be done to certify that the
3 cleanup criteria had been met. When the actual
4 decontamination is completed, we'll go back in and take
5 samples again to make sure that everything is cleaned up
6 to the level that we need it cleaned up to.

7 The radiological contamination that we would really
8 be going after is on the accessible surfaces within
9 portions of Buildings 4 and 6. And what we're talking
10 about are ledges, such as window sills, electrical
11 conduits, water conduits, beams, at the twenty-five and
12 thirty-six foot levels. And any beams in the high bay
13 areas that would be accessible from windows on the roof
14 would also be reviewed. Based on the risk assessment,
15 decontamination would not be required on the inaccessible
16 horizontal surfaces above the thirty-six foot level.

17 We went back and we've been coordinating with
18 Illinois Department of Nuclear Safety, which is the state
19 agency that's responsible for some oversight on this
20 project. And on the 8th of February, went back and did
21 what we call the accessibility study.

22 And we went back in there and found that, just to
23 make sure that contamination of those higher levels was
24 not of a nature that it required removal. The lower
25 concentrations of material were actually found. When we

1 looked at the exposure scenarios, we found that the
2 affected areas, the exposure scenarios in those affected
3 areas was less. It was four hours in actuality rather
4 than twenty hours that we had assumed earlier in the
5 other slide. And that the inaccessible areas actually
6 were only about five percent of the total area affected.
7 We weren't, we're not talking about much of an area here
8 at all.

9 Now, where we're at right now is that we're in this
10 public review period. And what we've come out to do is
11 to get this information out to the public and concerned
12 citizens and to offer an opportunity for comments. As
13 you can see, the public review period goes until the 29th
14 of this month. So if you want to get in comments, please
15 try and get them in by the 29th of this month. Written
16 or oral. Or you have an opportunity tonight, also, if
17 you wish to make an oral comment. We do have a court
18 reporter who is here and is recording the meeting, and it
19 will also be published.

20 If you wish to make comments and send them in
21 writing, there's my address. You should have it in your
22 handout. Feel free to send them to me, and they will
23 also be included and considered when the final Record of
24 Decision, the final selected alternative is published.

25 Again, the comments in that will appear in a

1 Responsiveness Summary. All of the comments that we get
2 from the State, as well as from anyone else, associated
3 with the project will actually be addressed in the
4 Responsiveness Summary, presented in the Responsiveness
5 Summary. And a Record of Decision for the site will
6 actually occur or come out for press in May of 2000, this
7 May.

8 If you wish to stay in touch with us, we do have a
9 website. You can go through that particular website
10 there, WWW.MVS.USACE.ARMY.MIL, and you can go
11 from there to find the FUSRAP site.

12 There's also an Administrative Record that contains
13 the backup documentation for this particular action.
14 It's at the Madison Public Library. It's also in our
15 trailers which are located at the site where my mailing
16 address is. It's in Hazelwood, right on the edge of
17 Hazelwood and Berkeley near the airport.

18 Again, you can visit us. We are open to the public.
19 If you come out there, you will probably see Jacque at
20 the desk right in the front and the documents are also
21 there available to you. You can also give us a call if
22 you have any questions.

23 At this point I guess in essence what we're trying
24 to do here is to improve the human health and safety by
25 removing this waste from the Madison Site. And that

1 goes back to that first criteria and what our whole
2 purpose in being here is about.
3 So with that, we can take some questions and
4 answers. But before we get to that, what I'd like to do
5 is, the Illinois Department of Nuclear Safety could not
6 make it here tonight. Evidently, and I don't know what
7 the weather's like up in Springfield, but I think they
8 indicated they were getting some icing up there so they
9 couldn't make it down.

10 So what they've done is they've given us a statement
11 and they've asked us to read that statement. So if you
12 bear with me I'll read you their letter. It's not that
13 long. So this will also go in the official record.

14 This is from the Illinois Department of Nuclear
15 Safety to U.S. Army Corps of Engineers, St. Louis
16 District, FUSRAP Project Office.

17 "Due to hazardous weather, travel conditions
18 prevented our attendance at the public meeting on
19 Thursday, February 17th, 2000, in Madison, Illinois.

20 "The meeting is sponsored by the U.S. Army Corps of
21 Engineers, St. Louis District, to provide forum for
22 comments on their Remedial Investigation/Feasibility
23 Study and Proposed Plan for the clean up of the Madison
24 Site, parentheses, Spectrulite Consortium Incorporated.

25 "Following are the Illinois Department of Nuclear

1 Safety oral comments on the Proposed Plan for the Madison
2 Site.

3 "Comment No. 1: The department agrees with the
4 Corps that removal of the contamination at the
5 Spectrulite facility is the only responsible remediation
6 approach in the Remedial Investigation Report.

7 "Comment No. 2: It is the department's position
8 that the Illinois rules regarding radiological criteria
9 for licensed termination are relevant and appropriate
10 since the activities conducted at the Site and resulting
11 in contamination are similar to those currently requiring
12 Illinois license. Any decontamination operation within
13 the State of Illinois requires license authorization
14 since the possession, use, and handling of radioactive
15 material is involved.

16 "No. 3: The Corps has inappropriately and
17 inadequately applied relevant NRC, Nuclear Regulatory
18 Commission, regulatory guidance to set the cleanup
19 criteria and to establish the scope of the remediation.

20 "No. 4: The Corps should complete the required risk
21 assessments for future resident scenarios, including all
22 inherent exposure pathways. Since the proposed
23 remediation plan calls for the property to be released
24 for unrestricted use, the Corps must demonstrate the long
25 term suitability and effectiveness of the plan.

1 "No. 5: The Department is encouraging the Corps to
 2 characterize all contaminated areas and to complete
 3 appropriate technical analysis. The department is
 4 striving to ensure that Spectrulite remediation will be
 5 comprehensive and that the cleanup standards will comply
 6 with State of Illinois regulations applicable to the
 7 release of the property for unrestricted use.

8 "No. 6: The department is preparing written
 9 comments on the Proposed Plan to submit during the public
 10 comment period."

11 And this letter is signed Gary W. McCandless, PE,
 12 Chief, Low Level Radioactive Waste Licensing and Site
 13 Decommissioning Section, Division of Radioactive
 14 Materials, Office of Radiation Safety.

15 Okay. What I would like to do right now is to take
 16 any kind of questions that you have or comments. I do
 17 have several people from the Corps of Engineers here to
 18 help address some of those questions if need be.

19 I have Jim Moos who is an Industrial Hygienist with
 20 us. Debbie McKinley who is an Environmental Engineer.
 21 Dennis Chambers who is a Health Physicist. Lou Dell'Orco
 22 who is my Project Manager. And Mr. Bill Levins who is an
 23 attorney for the Corps of Engineers. I also have Mr.
 24 Jacque - not Mr. - Ms. Jacque Mattingly who handles
 25 most of our community relations things.

1 If anyone has a comment, I would really like it if
 2 you would come up here so I can make sure that the court
 3 reporter gets it all correct into the record. If that's
 4 too uncomfortable, we can go, you can go from your place
 5 also. Just speak up so that she can hear it all. She's
 6 hiding back here behind the screen.

7 Anybody have any comments?

8 MS. TAYLOR: Glenda Taylor. I have several
 9 comments and several statements. First of all, you said
 10 that prior to that job in 1959 to 1960 nobody has no clue
 11 what happened or what was processed during that time?

12 MS. COTNER: There are historical records that
 13 they reviewed. What they don't know is what those rods
 14 ultimately were used for. Okay? They know the processes
 15 that were used, but they don't know what kind of
 16 classified purposes those rods were actually used for.

17 MS. TAYLOR: Just those two rods 1950 to 1960?

18 MS. COTNER: It was 1957 to 1962, was when
 19 that process was going on. My understanding is that it
 20 was pretty much, for lack of a better term, that area was
 21 pretty much isolated from the rest of the facility, and
 22 when they completed their actions, everything was packed
 23 up and hauled off.

24 MS. TAYLOR: I have a quit claim deed here and
 25 this deed is from the United States Government to Dow

1 Chemical in 1951. In this deed it states uranium and
 2 thorium. So I don't think it's just that type from '59
 3 to '62. And the thorium was never even recognized at
 4 all, the thorium contamination. And that wasn't even
 5 recognized at all.

6 MS. COTNER: Can we get a copy of what you've
 7 got there?

8 MS. TAYLOR: I don't want to give it to you.
 9 I'm sorry.

10 MS. COTNER: Okay.

11 MS. TAYLOR: Also the biological half life of
 12 thorium exposed to a person is fifty-seven thousand
 13 days. Uranium is three hundred days. Thorium is a long
 14 emitter. It's an alpha emitter, it's just a long
 15 emitter. I don't know how to explain it. As far as
 16 uranium is that we add another gamma and alpha. There's
 17 mostly fast speed. And as far as the chemical processing
 18 extraction that went on, it was radium-235 to 238, which
 19 is not a natural uranium. Isn't that correct?

20 And there's barrels out there and tanks - let me
 21 finish, please. Barrels and tanks are buried out through
 22 that entire site. We know that barrels have been dug out
 23 that contain magnesium. And the tanks, we don't know
 24 where they're buried at or where all barrels are buried
 25 at at this time. We just know that there's some.

1 There's no longitudinal studies been done around the
 2 community. We have an elementary school right across
 3 from Spectrulite. And Spectrulite, when she talked about
 4 the consolidated companies and all that, they're all
 5 owned by the same person, A. W. Barnes, who lives in
 6 Chesterfield, who also is from the Delaware Company,
 7 which is, Dow is from Delaware.

8 Also I'd like to make my comments as far as NRC and
 9 the Atomic Energy Commission. There are surveys that
 10 were supposed to be done throughout Dow while they
 11 handled the uranium and thorium and these surveys was
 12 never submitted to us throughout the whole sixties and
 13 seventies and eighties. And they have the Spectrulite
 14 licenses and there's supposed to be a close out survey
 15 done by the NRC, which this has never been exposed to us
 16 or the public on what those surveys were.

17 And I would just really like to know what is
 18 undergone after all of this. And if you call it NRC, as
 19 you have been calling it, the Spectrulite license, the
 20 Dow Chemical license has disappeared. It's all
 21 classified. So you cannot find anything except a number
 22 and anything that the radioactive license held to tell
 23 you how much uranium or how much thorium was involved.
 24 And what they did there is all gone, disappeared. So
 25 you'll never find out.

1 And also I'd like to state that late effect
2 radiation exposures, we talked about that. Leukemia,
3 that's one of the late effects of radiation exposure. So
4 I guess you all know that from bombing Japan, all those
5 people are having leukemia. And AML, that's one of the
6 leukemias you get from radiation exposure. And
7 specifically one is acute myelogenous leukemia, that's
8 myelocyte dysplasia of the bone marrow.

9 And my father worked out in that area and he died of
10 it three years ago. And we never could figure out why
11 would he get exposed to radiation. Where would he get
12 this radiation exposure at? Because the company that he
13 worked for didn't handle radiation or radioactive
14 materials, nor did they handle toxic chemicals. Then we
15 found out the entire time they were risking his health.

16 That's pretty much my comments to it all. I really,
17 I understand that the scope that you're talking about is
18 just this building alone, but I think everything I said
19 is related to this scope. I'm sorry, that's my opinion.

20 And I really don't think the public has a right to
21 sit here and ask how are you going to decontaminate it
22 with all this other information that's being withheld
23 from the public. You're trying to make a decision
24 without getting all the facts is my personal opinion.

25 And as the history of FUSRAP, we all know what

1 happened to St. Louis sites. That you went from one
2 contamination and you spread it all around when it was
3 hauled away to the other St. Louis sites. McDonnell
4 Douglas area, the Coldwater Creek. So it wasn't held
5 properly.

6 So I don't know if you can guarantee that this site
7 will be held properly or not. And I'm not pointing my
8 finger at you guys. You guys back in the forties were
9 probably not even alive at that time. But I just don't,
10 really don't think this was handled at all very well and
11 I think it's very close minded.

12 MS. COTNER: Do you want to address?

13 MR. CHAMBERS: Dennis Chambers. A couple of
14 comments I would provide is that first of all, as far as
15 the records that are available on prior sites, the Dow
16 Chemical was licensed here and those licenses were
17 ultimately transferred when the state became an agreement
18 state to the IDNS and there are files at that point.

19 MS. TAYLOR: No, they're not. I'm sorry.

20 MR. CHAMBERS: IDNS has indicated they have
21 files from Dow, as well as the Conalco. I do believe
22 they're very sincere. In addition, regarding the
23 exposures, I'd just like to point out that the radiation
24 does cause cancer. However, the concentrations required,
25 the amounts required in order to cause cancers are

1 generally quite high. There have been no, no cancers
2 that have ever been attributed to break-through radiation
3 in the range below about ten REM of radiation. So these,
4 not knowing exactly what transpired in the far past, it's
5 just the levels that are present now and based upon all
6 of the records we have are relatively low.

7 The other issues as far as the nature of the
8 uranium, uranium-238 is naturally occurring. Uranium-235
9 is naturally occurring. And they occurred in the same
10 concentrations. Correction, not in the same
11 concentrations but in the same general percentages.
12 Thorium-230, in addition, which I assume is the thorium
13 you were concerned about?

14 MS. TAYLOR: And 232.

15 MR. CHAMBERS: Okay. Thorium-230 is a daug
16 product of uranium. And it is present but it takes an
17 extremely long period of time for it to become present.

18 MS. TAYLOR: Can you tell me how long it takes
19 for it to decay?

20 MR. CHAMBERS: After the uranium is separated,
21 in that process, then the thorium is separated from it.
22 And, therefore, it has to have a sufficient time to build
23 back in. Thorium-232 again is generally not present in
24 these materials. Because again, all we're talking about
25 is strictly the uranium ores. The purified uranium is

1 what was brought over here.

2 So there are other operations that we don't have any
3 records of that you are alluding to. And, frankly, I
4 think that we would be glad to have access to anything
5 that you might suggest that we have not been able to
6 identify.

7 MS. TAYLOR: Well, if I can get it, I'm sure
8 you can get it easier than I could. I mean, I'm not
9 being smart about it or anything. I think you have a
10 little bit more capabilities to get things than I got,
11 what I got.

12 And as far as thorium, there is thorium there.
13 And could you explain to me, somebody is digging
14 underground twenty to twenty-five feet, would they be
15 exposed to what's buried underneath the ground or is this
16 up on the roof, and this dust that you're talking about
17 the last thirty, forty years exposure?

18 MS. COTNER: Could you repeat the question?

19 MS. TAYLOR: You're talking about exposures
20 right now at this point. What about thirty, forty years
21 ago? What about digging into the ground twenty and
22 thirty feet?

23 MS. COTNER: We don't have record of what was
24 there twenty and thirty years ago. I mean, our samples
25 are from 1998 and 1989 at the best. Our purpose is not

1 to assess what happened out there twenty, thirty years
2 ago. Our purpose at this point in time is to see what's
3 there right now and to make sure that we do whatever we
4 can to protect the health of the people that are
5 currently on the facility and for anyone who would in the
6 future assume --

7 MS. TAYLOR: -- What about the community?

8 MS. COTNER: The community is also considered.
9 In this case though, all of the records and all of the
10 sampling indicated that was the only area that was
11 exposed. And even within that population, the only
12 problems were essentially the utility workers that would
13 get up there and get that close to those beams.

14 MS. TAYLOR: Oh, so you did surveys around
15 the community?

16 MS. COTNER: We did surveys, we did a survey
17 analysis based on the historical documentation that we
18 had access to.

19 MS. TAYLOR: But not on the community itself,
20 just on the Spectralite setting right now?

21 MS. COTNER: We did a survey based on where we
22 had documentation that indicated where FUSRAP authority
23 would extend. In other words, where those wastes that
24 would be attributed to the activities that are governed
25 by FUSRAP occurred. We can't go into a community and

1 clean up anything else, everything else that's there. If
2 someone else put it there, it's not our authority.
3 Congress does not give us authority to do that.

4 MS. TAYLOR: The Atomic Energy Commission was
5 under the regulations at that time. I mean, they were
6 the regulatory body of that area. The Atomic Energy
7 Commission which is slash now the NRC.

8 MS. COTNER: But the thing you have to keep in
9 mind is that our authority basically only allows us to go
10 after the material that can be shown that we have reason
11 to believe was contributed by the activities that
12 occurred in Buildings 4 and 6.

13 MR. MOOS: Jim Moos, the Corps. I think that
14 to help out, the authority that you're referring to is
15 that which is related to the Atomic Energy or the Atomic
16 Weapons Program. And some of the other contaminants that
17 may be present are attributable to other activities that
18 occur on that facility.

19 MS. TAYLOR: And you just forget about that
20 and about the people that live out there or the other
21 workers that are around the industrial sites?

22 MR. MOOS: No.

23 MJR. WOOD: The community doesn't need to
24 forget about that. But this program was instituted to
25 address a particular part of the activity that went on

1 here. The community, that's not to say that the
2 community needs to dismiss everything else that went on
3 in the locality. This, this program that we're in charge
4 of, though, isn't intended to address those other, those
5 other contaminants, if you will, or those other issues.

6 MS. TAYLOR: That's too bad. The public loses
7 again, right?

8 MR. LEVINS: Bill Levins, the Corps. There
9 may be other remedies through your state agencies,
10 through the EPA, through other cleanup bodies. It's just
11 not something that we're charged with doing.

12 MS. TAYLOR: Right. I understand.

13 MR. LEVINS: And we're not saying that there
14 aren't problems out there and that they don't require
15 some type of cleanup or remedy. It's simply not within
16 our authority to do it.

17 MS. TAYLOR: And whose authority is it since
18 the Atomic Energy Commission was the regulatory body over
19 that property during that time?

20 MR. LEVINS: I can't really address that in
21 depth without knowing what types of contaminants are out
22 there, what other regulatory agencies may have some
23 authority. Those are things that the community can
24 explore.

25 MS. TAYLOR: Well, then could you answer one

1 question for me? You're the health physicist, correct?

2 MR. CHAMBERS: That's correct.

3 MS. TAYLOR: Could you explain to me why did I
4 get three point five MRs per hour on work clothes for
5 five years old?

6 MR. CHAMBERS: I would be very eager to see any
7 clothing frankly that you could receive three point five
8 MRs per hour on. I would, you know, by all means, I'd be
9 glad to see them and document the measurements and find
10 out exactly what it's attributable to.

11 MS. TAYLOR: Well, I can't let you do that.

12 MS. COTNER: Would anyone else wish to come up
13 and make a comment? Anyone else?

14 MR. BELL: My name is Eugene Bell, Junior, and
15 I'm one of those utility or maintenance workers from
16 SCI.

17 The young lady stated that the feasibility survey
18 was first done in 1989. And we, I keep reading in the
19 paper where we were informed about these studies then, we
20 were kept abreast of what was going on in the facility.
21 And I didn't hear it until maybe two years ago. Okay?

22 For a maintenance worker, I work up in the steel.
23 If there's a break in an airline, most of our air drops
24 and our water comes from the areas that you're talking
25 about that the contamination is in. As far as safety

1 equipment, back in those days the only thing we had was a
 2 pair of gloves and our wrenches.
 3 You're telling me that, I understand you can't say
 4 what the exposure was. We mentioned thorium. Thorium is
 5 still on the site. We were told that we could sit on the
 6 thorium for at least ten years almost naked and nothing
 7 would happen to us. We have some that have been put in
 8 containers as late as last year. Some of the stuff is
 9 still exposed.

10 And I'm hearing conflicting stories. If I'm being
 11 told that on one side it's safe and then being told here
 12 that it can cause me some trouble down the road, and I'm
 13 just wondering when will we hear the truth?

14 I understand, I'm like the young lady that spoke
 15 before me, I know you're there to clean up the situation
 16 in the steel. But you didn't address her question as far
 17 as the thorium. I'm in the plant every day. I know it's
 18 there. And I'm just saying it is as safe as they're
 19 telling us or does it need to be removed?

20 MS. COTNER: Again, the thing you have to --
 21 really, I understand where you're coming from. And if I
 22 worked there, I would be concerned too. But the thing we
 23 have to keep in mind is that the processing that we were
 24 given authority to address is basically uranium
 25 extrusion. Again, and so all of our records and all of

1 our analysis and our sampling indicated uranium. If
 2 there are other contaminants there, if there's thorium
 3 there in whatever form, that is not associated or
 4 something that we would have the authority to address.

5 MR. BELL: But she said it was a byproduct.
 6 Am I correct, did I hear that thorium was a byproduct?

7 MR. MOOS: The uranium that we have at the
 8 Madison facility that we're addressing is a natural
 9 purified state and it's only uranium. We found no
 10 existence of the presence of thorium-230, which Mr.
 11 Chambers alluded to was a byproduct of uranium-238. Any
 12 existence of thorium at the facility would be
 13 attributable to thorium-232, which is a different strain
 14 or different isotope of thorium.

15 So the uranium contamination that's part of the
 16 government's Atomic Energy program, is pure uranium.

17 There are and have been, in fact, other licensed
 18 operations throughout the facility with natural thorium
 19 or thorium-232 for commercial purposes.

20 MR. BELL: Right.

21 MR. MOOS: And our program is limited to what
 22 the government's actions were back in the fifties and
 23 sixties with uranium for government purposes.

24 MR. BELL: Okay. All right. Thank you.

25 MS. COTNER: Are there any other questions, or

1 would anyone else like to make a comment?

2 MR. HOLZUM: I've got one question for the man
 3 right here that just was up there. Now, that plant that
 4 you were working in, they say the high levels that they
 5 had, that building is like all of them, open, isn't it?
 6 It blows through there all the time?

7 MR. BELL: Yeah, the buildings --

8 MR. HOLZUM: There's windows there, right?

9 MR. BELL: Yeah, all windows. The upper tiers
 10 are basically glass.

11 MR. HOLZUM: Upper level, upper level, what
 12 happens when they turn around? You know the wind's going
 13 to blow through there. It's going to blow that stuff all
 14 over the area.

15 MR. BELL: If what I'm hearing is true, most
 16 of it's caked up in the ceilings, is what you are saying.
 17 Okay. And you're talking about going up there and
 18 removing it. What I'm saying, over the past twenty-eight
 19 years I've been walking around there.

20 MR. HOLZUM: Right.

21 MR. BELL: And I wasn't aware. If they found
 22 out in '89, we should have been told or given some kind
 23 of protective equipment when we was sent up there to work
 24 on airlines or any other work we performed in that area.

25 MS. TAYLOR: I think you should have a system

1 to ensure his blood count the whole time he was working
 2 there.

3 MR. CHAMBERS: Actually, if I could, with
 4 respect to the blood tests, the blood test doesn't do
 5 anything until you get to doses above about fourteen REM.

6 MS. TAYLOR: You don't know how much he really
 7 got exposed to.

8 MR. CHAMBERS: I'm just saying the nature of
 9 the materials that we're dealing with here would not show
 10 up on a blood test.

11 MS. TAYLOR: So his blood count wouldn't do it?

12 MR. CHAMBERS: That's correct.

13 MS. MOTHERSHED: Mary Jo Mothershed. My
 14 husband is the one that passed away three years ago, he
 15 worked out there, with the leukemia. In this book here
 16 on page two you said that Mallinckrodt retained
 17 responsibility to uranium metal during the work cycle.
 18 After AEC operation was completed, Malinckrodt removed
 19 unused uranium material and cleaned up the facility.
 20 Although the records detailed the operation or the
 21 effective of cleanup have not been located.

22 So how do you know where they put that uranium at?
 23 Where did they put it? You don't know; no record. They
 24 could have put it out there in barrels, put it in
 25 barrels. My husband dug a ditch, dug water line and got

1 in some of them barrels and got contaminated.
 2 That whole area to me in my opinion is fall under
 3 all of this. Because it came from that plant. From that
 4 plant is, I think this should be all in that, all the
 5 whole area, the whole area. Don't you agree? They don't
 6 know where they disposed this unused uranium. The
 7 records say in this book you don't know. So they could
 8 just drive right down a block from the street, dump it
 9 out there in a yard, dig it up and covered it up.

10 MR. CHAMBERS: All of the surveys, the studies
 11 that have been done the historic information from the
 12 point where the area of the site was really used was
 13 defined. It's simply a fact that the information, and
 14 some of the old time employees that we've talked to in
 15 the last few years, indicate that the materials came into
 16 a particular portion of the plant. They were processed
 17 in that portion of the plant. Once the processing was
 18 finished, that the surfaces in the plant and so forth
 19 were decontaminated.

20 They took the uranium in the metal form that it
 21 took, they took it off the site back over. Because
 22 again, it was in a classified configuration, but the
 23 facility at that point was decontaminated in the areas
 24 there where the workers indicate. These are historical
 25 reports that we are referencing.

1 MR. HOLZUM: How far back?
 2 MR. CHAMBERS: Pardon?
 3 MR. HOLZUM: How far back?
 4 MR. CHAMBERS: These are the studies we have
 5 back in the late fifties and early sixties.

6 So that's the information we currently have
 7 available. And all the information that we have here
 8 indicates that the AEC operations with regard to the
 9 uranium extrusion were limited to the areas specifically
 10 there in Plant 4 and Plant 6 around the extrusion press.

11 MS. TAYLOR: But you never really answered her
 12 question, because where did you dump it out?

13 MR. CHAMBERS: I'm sorry?
 14 MS. TAYLOR: Where did it get dumped out? If
 15 you can't find the records, where did it get dumped at?
 16 That's my one question.

17 The second question, about the gentleman that asked
 18 that he's sitting on thorium, what is his exposure rate?

19 MR. CHAMBERS: With respect to the waste, the
 20 typical approach taken with any waste that would be
 21 generated of that type as far as the clean up is
 22 concerned, all that material should have been taken
 23 directly back by Mallinckrodt. We would have to go back
 24 and review historical records to document that. But that
 25 would be the normal approach to be used.

1 MS. TAYLOR: That's normal, I agree. And
 2 underneath the IDNS and the NRC was that really properly
 3 done? I'm sorry, you reported that.

4 MR. CHAMBERS: Approximately.

5 MS. TAYLOR: Right. And then the Atomic Energy
 6 Commission in 1967, August 1st, 1967. Prior to that
 7 there was no records lost. So, they could actually bury
 8 it in the backyard. And it will state that was okay
 9 prior to 1967, on injuries in the first couple years in
 10 1967; isn't that correct?

11 MR. CHAMBERS: No. AEC -

12 MS. TAYLOR: - NRC -

13 MR. CHAMBERS: - No, the Atomic Energy
 14 Commission had a dual function. They had one function
 15 which involved research and so forth for weapons. It
 16 also had a second function that was a regulatory
 17 function, to regulate the radioactive materials. And it
 18 was used throughout the United States. Ultimately
 19 Congress made the decision in the early seventies to
 20 split that mission into two different groups. That's
 21 when the Nuclear Regulatory Commission came into being.
 22 And all the other portions of it became the Energy
 23 Research and Development Agency. But prior to that you
 24 did have a regulatory agency. It was just a different
 25 portion of the AEC performing that function.

1 MS. TAYLOR: You're telling me you did have a
 2 regulatory agency, then the decontamination that
 3 Mallinckrodt did should be in their files, not
 4 Mallinckrodt's files but the Atomic Energy Commission's
 5 files. Because they have to file with the state and and
 6 close out surveys have to be done, correct?

7 MR. CHAMBERS: Close out surveys do currently
 8 have to be done under current practices and so forth.

9 MS. TAYLOR: Right.

10 MR. CHAMBERS: Realize that the things were not
 11 done with the same degree of precision even ten years
 12 ago, or fifteen years ago, that they are today.

13 MS. TAYLOR: Where are those records?

14 MR. CHAMBERS: I'm sorry?

15 MS. TAYLOR: Where are those close out surveys
 16 at?

17 MJR. WOOD: Ma'am, I think this might bring a
 18 focus to the meeting. Clearly you've got some legitimate
 19 questions that some government agencies haven't answered
 20 to your satisfaction. What we're here to do tonight is
 21 tell you that we were charged with going out and finding
 22 out what we know to be there now, either from the record
 23 that is available or from the testing that we've done,
 24 and address that.

25 Now, if there's other stuff out there that we don't

1 know about, that lies outside our mandate, outside the
2 Corps' mandate with this particular job to clean up,
3 that's outside the Corps of Engineers' mission at this
4 point.

5 That's not to say there's not stuff that isn't still
6 out there that even the Corps doesn't know about, you
7 don't know about. And there are ways and there are
8 agencies and people that you can access to continue to
9 ask those questions. But we can't give you the answers
10 to those questions because we don't know them either. If
11 it's not in the record and there are no records of these
12 other possible contaminants, we don't know it either and
13 we can't help you address those questions.

14 What we can address is what we do, in fact, know to
15 be there and address the plan we've come up with to try
16 and address that known contamination.

17 MS. TAYLOR: That used to be Dow Chemical,
18 correct?

19 MJR. WOOD: Excuse me?

20 MS. TAYLOR: The plant Spectrulite used to be
21 Dow Chemical. Which Dow Chemical is outlining your
22 operations; am I not correct?

23 MS. COTNER: The Atomic Energy Commission
24 subcontracts out --

25 MJR. WOOD: We're the Corps of Engineers.

1 MS. TAYLOR: Right.

2 MJR. WOOD: Okay. And we, if you will, took
3 over this mission of cleanup from the Department of
4 Energy.

5 MS. TAYLOR: Right.

6 MJR. WOOD: The Corps had no connections with
7 the processing of uranium, other than the Manhattan
8 District Project, the Corps ran the Manhattan Project,
9 but in this particular area we have.

10 MS. TAYLOR: You had nothing to do with the
11 Manhattan Project is what you're telling me?

12 MJR. WOOD: No. No. I just said that we did
13 the Manhattan District, the Corps of engineers ran the
14 Manhattan Project.

15 MS. COTNER: The thing to keep in mind, well,
16 what you've got to keep in mind, though, is that I have a
17 sneaking suspicion that Dow probably worked for a lot of
18 other people besides the Corps of Engineers -- Not the
19 Corps of Engineers, but the Atomic Energy Commission.
20 And that our authority is limited to those activities
21 that we know were associated with atomic weapons
22 manufacture and that whole process.

23 It doesn't mean, though, that other things didn't go
24 on out there that perhaps were part of Dow's activities.
25 It does however mean that we can only address those parts

1 that we know and that we have been tasked by Congress to
2 address. We cannot go out and address other things.

3 MS. TAYLOR: I understand. And as the Corps of
4 Engineers you represent the United States, correct, or
5 what do you represent?

6 MJR. WOOD: We work for the president.

7 MS. TAYLOR: So you represent the United
8 States. Which Dow Chemical bought the land from the
9 United States and processed thorium and uranium
10 underneath the United States Department of Defense.
11 Doesn't that fall back to you guys?

12 MJR. WOOD: I couldn't even begin to give you
13 an opinion on what falls to us as a legal responsibility
14 or whatever. I wouldn't even try to.

15 MR. LEVINS: I'm not sure I can either. The
16 question's rather broad. The only thing I guess I could
17 say, Ms. Cotner said our mandate goes back to products
18 that came out of the atomic weapons program and that is
19 what Congress told us to clean up starting in October of
20 1997.

21 There may be other contaminants out there. There
22 may be other problems. There probably is some type of a
23 remedy, maybe going to the Illinois EPA. I'm not really
24 an expert on that. All I can address and Sharon can
25 address is what our program is. And I understand your

1 arguments that all of this came out of the Department of
2 Defense and the Corps of Engineers' is a department of
3 the federal government. I realize that. But still we
4 have a very specific law and Congress has told us this is
5 what you need to go out and identify. And here are funds
6 to identify, and here are funds to clean it up. And
7 we're going through the process that you saw in the
8 presentation.

9 MS. TAYLOR: Right.

10 MR. LEVINS: We simply don't have the funds or
11 the authority to go out there and start looking for all
12 types of contaminants or threats to human health. We
13 just don't have the legal authority to do that.

14 MS. TAYLOR: I understand. But even in your
15 report you mentioned that there was thorium
16 contamination. In which thorium and uranium were both
17 used on that site. And that was back in 1951 and just
18 keeps going on and on.

19 I mean, I just don't feel that, okay, you go out
20 there and clean up the uranium. Thank you very much.
21 Which you and I both know you can't scour down uranium.
22 All you can do is get it into the background hopefully
23 and just the hell with the thorium?

24 I mean, don't you people, do not the people have a
25 right to know there's thorium sitting out there and

1 there's thorium contamination in that area along with the
2 uranium?

3 MS. COTNER: If there's thorium contamination
4 out there our records have not indicated it. It has not
5 indicated the presence of it.

6 MR. MOOS: There is thorium contamination
7 present at that site documented in the remedial
8 investigation at low levels. But it's thorium-232, which
9 is a part of another commercial process that goes on at
10 that facility. That is correct, as we have stated.

11 MS. COTNER: But it is not thorium associated
12 with the uranium extrusion process that we have the
13 authority to address.

14 MR. MOOS: That's correct.

15 MS. COTNER: And it's beyond our authority to
16 clean that up. Our focus is on the products and
17 contaminations developing from the uranium extrusion.

18 MS. TAYLOR: So only the uranium and nothing
19 else, but uranium is what you are saying?

20 MS. COTNER: That is what our authority limits
21 us to, yes. If there's anything out there that you have
22 concerns about, I think as Bill has amply stated, then
23 you may wish to contact other regulatory-type agencies
24 and I would inquire as of them. Such as the Illinois
25 EPA, such as the U.S. EPA, perhaps IDNS.

1 But the issue here is the fact that we cannot go
2 wherever we wish and clean up anything other than
3 Congress gave us the direction to. We have strict rules
4 that limit how we can expend the funds that we've been
5 given.

6 MS. TAYLOR: I understand that.

7 MS. COTNER: I mean, that's the way we're
8 handicapped.

9 MS. TAYLOR: But, I understand that. I'm just
10 saying that in 1951 there was thorium there at the plant
11 that you're discussing you're cleaning up of the uranium
12 to. And the uranium was there at the same time the
13 thorium was. And so what you're saying to me is Congress
14 only gave you funds to clean up the uranium and the
15 uranium only at that site and nothing else?

16 MJR. WOOD: Well, I think what we've said is we
17 would clean up thorium if we knew there was thorium
18 associated with the process that we're here to remediate.
19 But we've said that the thorium that is there isn't
20 connected with the process that created the contamination
21 that we're here to clean. It could be thorium from a
22 different process that this firm may have contracted to
23 carry on.

24 And so our mandate, our money, our authority,
25 doesn't extend to cleaning up someone else's mess. We're

1 here to clean up the mess that was associated with the
2 DOE's work related to the uranium and that processing.

3 And any other contamination, you know what, as a
4 private citizen I'd be sitting there in that chair and
5 saying I need to go get, I need to go talk to my
6 congressman or somebody because. And I'm glad the Corps
7 is doing that, but there's also a whole lot of other
8 stuff out here I'd like to see cleaned up. And, but we
9 don't have the authority to go clean stuff that wasn't
10 associated with this particular program.

11 MS. TAYLOR: I just don't understand that the
12 quit claim deed specifies that, you know thorium and
13 uranium were both used under the national defense, which
14 caused that? I'm sorry.

15 MJR. WOOD: But the thorium is not of the sort
16 that would have been connected with this. So granted,
17 we've found contamination. But the only contamination
18 we've found connected with this process that we're here
19 to clean up is the uranium contamination. There's no
20 thorium contamination that we have found that could have
21 evolved from the process we're here to clean. It had to
22 have been from another process.

23 Granted there may have been thorium associated with
24 this process before, but it's not here now for us to
25 clean up. There's another kind of thorium that wasn't

1 associated with this. That's the distinction.

2 MS. CADUE: Shirley Cadue. I had a quick
3 question. Do you have money now to do the clean up, and
4 when will the clean up start?

5 MS. COTNER: We have money budgeted for it
6 this year. We're currently negotiating with the
7 Spectralite folks to determine the best time to do it.
8 We would like to do it this summer sometime. It's about
9 two weeks worth of work and we will have to issue the
10 Record of Decision prior to us actually being able to
11 start that process, to actually start the remedial
12 action. So again, our hope would be that we'd be able to
13 do it this summer. We have money in hand to begin that.

14 Anything else?

15 MJR. WOOD: Does anyone else have any
16 questions?

17 MS. COTNER: Thank you for coming.

18 *****

1 State of Missouri)
2) ss.
3 County of St. Charles)
4

5 I, Sandra McGraw, Certified Shorthand Reporter and
6 Notary Public within and for the State of Missouri, do
7 hereby certify that I was present and reported all of the
8 proceedings had and entered of record in this cause and,
9 further, that the foregoing pages contain an accurate
10 transcription of my shorthand notes of those proceedings.

11 In witness whereof, I have hereunto set my hand and
12 affixed my notarial seal on this _____ day of
13 _____, A.D., 2000.

14 My commission expires July, 19, 2001.
15
16

17 _____
18 Sandra McGraw, CSR
19 Notary Public
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DEPARTMENT OF NUCLEAR SAFETY

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George H. Ryan
Governor



Thomas W. Ortziger
Director

**TO: U. S. Army Corps of Engineers, St. Louis District
FUSRAP Project Office**

Due to hazardous weather, travel conditions prevent our attendance at the public meeting on Thursday, February 17, 2000 in Madison, Illinois. The meeting is sponsored by the U. S. Army Corps of Engineers, St. Louis District (Corps) to provide a forum for comments on the Remedial Investigation, Feasibility Study and Proposed Plan for cleanup of the Madison Site (Spectrulite Consortium, Inc.).

Following are the Illinois Department of Nuclear Safety (Department) oral comments on the Proposed Plan for the Madison Site:

1. The Department agrees with the Corps that removal of the contamination at the Spectrulite facility is the only responsible remediation approach in the "Remedial Investigation Report."
2. It is the Department's position that Illinois rules regarding radiological criteria for license termination are "relevant and appropriate" since the activities conducted at the site and resulting contamination are similar to those currently requiring an Illinois license. Any decontamination operation within the State of Illinois requires license authorization, since the possession, use and handling of radioactive material is involved.
3. The Corps has inappropriately and inadequately applied relevant NRC regulatory guidance to set the cleanup criteria and to establish the scope of the remediation.
4. The Corps should complete the required risk assessments for future-resident scenarios, including all inherent exposure pathways. Since the proposed remediation plan calls for the property to be released for unrestricted use, the Corps must demonstrate the long-term suitability and effectiveness of the plan.



5. The Department is encouraging the Corps to characterize all contaminated areas, and to complete appropriate technical analyses. The Department is striving to ensure that the Spectralite remediation will be comprehensive, and that the cleanup standards will comply with State of Illinois regulations applicable to the release of property for unrestricted use.
6. The Department is preparing written comments on the Proposed Plan to submit during the public comment period.

Gary W. McCandless, P.E., Chief
Low Level Radioactive Waste Licensing &
Site Decommissioning Section
Division of Radioactive Materials
Office of Radiation Safety