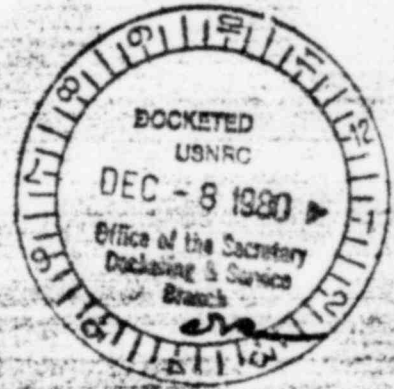


ORIGINAL

Transcript of Proceedings

UNITED STATES NUCLEAR REGULATORY COMMISSION

40-CFR-190



Silver Spring, Maryland

November 14, 1980

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1 UNITED STATES
2 NUCLEAR REGULATORY COMMISSION

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6 40 CFR 190
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8 7915 Eastern Avenue
9 Silver Springs, Maryland

10 Friday,
11 November 14, 1980

12 The meeting was held pursuant to notice at
13 9:00 a.m.

14 APPEARANCES:

15 HUBERT J. MILLER, Chairman
16 JOHN J. LINEHAN
17 GREGORY EADIE
18 Nuclear Regulatory Commission
19 Washington, D. C. 20555
20
21
22
23
24
25

P R O C E E D I N G S

1
2 MR. MILLER: Thank you for coming. We called
3 this meeting with the purpose in mind of informing our
4 licensees of the NRC of the steps that we are taking, and
5 the steps that you will have to take to implement the EPA's
6 environmental fuel cycle standard 40 CFR 190 which goes into
7 effect for uranium mills on December 1st.

8 It is a meeting intended primarily to inform our
9 licensees. There is, of course, broader interest so we
10 have consented to others being present.

11 The meeting grows out of an awareness on our part
12 that as we get nearer and nearer to December 1st that more
13 and more questions come up. Concerns get raised about
14 implementation of the standard, and we thought it most
15 appropriate and most effective to have you together as a
16 group to lay out the program, both what we will be doing
17 in the near term, December 1st, and over the long term on
18 an ongoing basis to implement the standard.

19 In laying this out for you we hope to show how
20 the program we have established or will establish recognizes
21 and accounts for the concerns and questions that have been
22 raised.

23 There are several petitions before the NRC which
24 effectively request that the standard -- that the enforcement
25 and implementation of the standard be stayed.

1 The theory is that because there are also
2 petitions before the EPA requesting reconsideration of the
3 standard as it applies to mills, that would NRC stay
4 implementation.

5 The course we are on is to implement the standard
6 on December 1st. The lawyers of NRC, several of which are
7 present, have concluded, or are about to make a recommendation
8 to the Commission--and Sheldon, you can help me out--the
9 gist of it is that it's a valid Federal regulation and, therefore
10 we are duty bound to enforce it.

11 I am sure I didn't get it exactly right, Sheldon,
12 but I will let you, later, give a more fine tuned answer.

13 What I am trying to say is that we are not here
14 to discuss the merits of the petitions before the EPA. We
15 want to talk about our implementation program, and I will
16 avoid answering questions that relate to that petition.

17 My name is Hubert Miller, and I am the head of
18 the New Uranium Mill Licensing Section. I will be giving
19 a presentation, a briefing, of the program. To help me on
20 that is Greg Eadie of my staff who is the lead person in
21 implementation of the standard; and also John Linehan who
22 I am sure you all know is the Section Leader of the Operating
23 Facilities Section.

24 Also in the room to assist if they are needed
25 are members of the Office of General Counsel of the NRC, the

1 Office of Executive Legal Director. That's Sheldon
2 Trubatch, and Bob Fonner respectively; INE, I believe Doug
3 Sly. Doug, are you here? If he is not, he should be here
4 shortly.

5 The Office of Standards Development, John Hickey,
6 Don Harmon; and other members of the Uranium Recovery
7 Licensing Branch Staff to help us on this presentation.

8 What I had in mind as far as an agenda was to
9 give a presentation. It takes a few minutes to describe
10 the program. I will beg your indulgence while I am giving
11 the briefing.

12 Unless you have a question where you just don't
13 understand what I am saying, it's just not clear, I would
14 ask you to hold questions until I can go through the
15 presentation.

16 Then I would like to entertain questions and
17 discuss the program with you.

18 I want to back up one minute and thank the
19 American Mining Congress for helping us with getting notice,
20 getting such short notice to people.

21 I should mention right here that the American
22 Mining Congress has requested that the meeting be transcribed.
23 We are a public agency. We have no problem with that.

24 Before we progress any further though, I want
25 to see if there is any overwhelming objection to transcription

1 of this meeting. If there is, we won't allow it.

2 (No response.)

3 MR. MILLER: I don't see that there is any
4 overwhelming objection.

5 QUESTION: Do you have any arrangements to get
6 some more of the handouts?

7 MR. MILLER: Yes. I was going to get to that
8 in a minute. Apparently you don't have enough. More
9 copies are being made.

10 There are two handouts, one of which is the--
11 the material has some text. It's the description of
12 procedure for compliance determination I think. We have
13 limited copies of that...If you could share copies.

14 If I just talk through the briefing it would take
15 about one-half hour, but I expect there will be some
16 discussion and questions. So, perhaps it could take
17 several hours.

18 I hope that the ventilation holds up long enough,
19 if it's not already unbearable. I don't know what we can
20 do to make it any better except to just go quickly.

21 After the meeting I believe what we present
22 will be all you'll want to know about how we are going to
23 implement 40 CFR 190 and what you have to do. There are
24 a few facilities where we would like to review site
25 specific points with you, and we can meet with you afterwards.

1 After our meeting there are a number of licensees,
2 and we will seek you out--perhaps we will have a break and
3 we will contact you--but we want to make some time to meet
4 with a few of you, and then anybody else who has questions
5 beyond what we present here today are welcome to meet with
6 us.

7 One word about security. I have been asked to
8 say that you have got to have this badge that you have been
9 given visible at all times, and you can be on the first
10 floor and you can be on the basement level without an
11 escort.

12 If you come up to see one of the project managers
13 or come up to our offices for some reason, somebody has to
14 be escorting you.

15 There are two pass-outs. Hopefully you will have
16 a copy. If you don't -- There is a copy of procedure for
17 compliance determination and then a copy of the viewgraphs
18 that I will be talking from.

19 MR. TRUBATCH: My name is Sheldon Trubatch from
20 the Office of General Counsel. I just want to emphasize,
21 especially because this meeting is being transcribed, that
22 this is an informal meeting with the staff and I believe
23 most of you now have a copy of a letter which reflects the
24 Commission's views on the Commission's contemplated enforcement
25 of this regulation.

1 MR. MILLER: On December 1st the standard does
2 take effect at uranium mills, and we will essential begin
3 the implementation through orders which amend licenses,
4 and I will get into more about what those orders are in
5 a minute.

6 At the same time that we are issuing the orders
7 we will be issuing a report which will be the supporting
8 regulatory document for the orders.

9 Sometime in the near future--it probably won't
10 be December 1st -- but sometime in the near future 10 CFR
11 part 20 will be revised to incorporate the requirements of
12 40 CFR 190. That was proposed a while back, and it is near
13 the point where it will be finalized.

14 As with any new standard, it is not possible
15 to immediately be to the point where you are operating your
16 determine and compliance. You are carrying it out in the
17 way that you, after a period of time, would be doing.

18 The program that we have outlined is-- it involves
19 a phased implementation of the standard.

20 Just to briefly give you an overview, we have
21 been, for the past several years, begun the process of
22 evaluating through our licensing action new mill licensing
23 renewals, the performance and operations of mills in terms
24 of how they would meet 40 CFR 190.

25 For those facilities that that was not done on

1 in the new licensing actions, we have over the past three
2 our four months completed radiological assessments much
3 like those we have done in licensing cases, with the
4 objective in mind of identifying potential problem areas,
5 highlighting those areas requiring environmental monitoring
6 to essentially establish a base upon which to begin implementa-
7 tion of the standard.

8 On December 1st we will issue orders which formally
9 invoke the standard. Then there will be a phase, the
10 compliance determination, the problems of implementing the
11 standard will be worked out.

12 A second phase will then be ultimately reached
13 or achieved, and I will go into more of this in a minute,
14 where we reduce the problems of compliance determination
15 to hopefully simplify procedures.

16 There is going to be a period of time when there
17 is more intensive monitoring, and then later there eventually
18 will reach a phase where it will be not a large commitment.

19 Let me say a few things about the conclusions of
20 the report that we are working on that will essentially
21 kick off the standard.

22 As I mentioned, we formed objective assessments
23 of each mill. The conclusions are that with the existing
24 requirements that has been established at mills through
25 the renewals and through new licensing actions, the

1 commitments made under the interim tailings performance
2 objectives, controlled blowing of tailings and whatnot,
3 should assure that 40 CFR 190 is being met at each facility
4 that no specific additional measures beyond the requirements
5 already committed to appear at this time, or have been
6 identified as being necessary.

7 I think what I am trying to say is on December 1st
8 the order won't say as of today you've got to do this, that
9 or the other thing in addition to what you have already
10 committed to in the past.

11 However, our assessments have involved both
12 predictive modeling as well as consideration of what
13 environmental monitoring data we had available.

14 We have identified the need for additional
15 information in many cases before a further conclusion about
16 compliance can be made.

17 In many cases it involves us screening out
18 extraneous sources. In other cases it is incomplete data,
19 and many cases it's uncertainty about the effectiveness of
20 the controls that have been previously committed to.

21 Let me say a few words about what the standard
22 covers and what it doesn't. First, it's 25 millirem limit
23 to a whole body or any other organs, and there must be
24 reasonable assurance, and I underline those words, that
25 that is being met.

1 It includes routine releases from normal
2 operations. It doesn't include releases from an accident.

3 It's an annual average. It isn't the sort of
4 thing, at least in our implementation program, where if you
5 got in one quarter greater than the 25 millirem limit you
6 are in violation. It's an annual average. I will get to
7 more in a minute how that works out.

8 Cumulative mill sources. It involves the exposure
9 to the public to not only your mill, but one that might be
10 nearby. What it excludes, of course, is radon and its
11 daughters, natural background radiation, mining operations
12 and associated activities. This could be stockpiles and
13 whatnot that are around the mines.

14 It does not include transportation, it does not
15 include decommissioning and decontamination. IT does not
16 include releases prior to 1980 and the ground contamination
17 that's associated with that.

18 As I mentioned before, we were talking about
19 phase implementation. It is going to take some time to get
20 to the point where it is reduced to simple operating procedure.

21 The objectives of our compliance determination
22 program is to achieve at each mill a simple standardized
23 assessment procedure with correspondingly simple reporting
24 requirements.

25 The objective is to assure consistency between

1 mills and to have consistency over time. We don't do
2 it differently from this month, or this six month period
3 to the next.

4 Eliminate uncertainty. The minds of the public
5 are saying are the mills operating within the limits or not;
6 do the mill operators reduce exposure on the part of the
7 operator and any kind of uncertainty that might exist in
8 the public, in the minds of the regulatory agencies which
9 would be the NRC; and uncertainty on the part of our Federal
10 agencies and State agencies that are interested in the way
11 the mills operate.

12 Another objective is to facilitate prompt
13 identification of problems where they exist. You avoid
14 a situation where you have to go through a complex procedure
15 in order to get to the point where you determine that there
16 is a problem; and to minimize the costs and staff time for
17 you and for us.

18 The primary basis for the compliance determination
19 will be actual monitoring data, not computer codes. The
20 emphasis will be on measurements at the nearest residence,
21 the location of concern.

22 Codes. Let's take Mildos for instance. The kind
23 of code that I'm talking about is one that includes estimation
24 of source terms, atmospheric transport and dosimetry.

25 As anyone who is familiar with these codes knows

1 that there is a good deal of uncertainty about estimates of
2 source terms; considerable uncertainty about atmospheric
3 transport, particularly if there are terrain effects.

4 For these reasons it is most appropriate to
5 not go through the process of computing that concentration
6 at the nearest residence, but to measure it.

7 Now, while the code isn't our primary method
8 of compliance determination--of course there is value and
9 necessity for codes. We obviously have to use them in
10 licensing action because we have an obligation to predict
11 the potential impacts of the licensing action.

12 So, on a prospective basis protective codes are
13 a must. They can also -- they are also helpful in developing
14 environmental monitoring requirements and identifying potential
15 problem areas.

16 As we talk more you will see them actually aiding
17 in the interpretation of the environmental monitoring data
18 that will be gathered in the programs that are established.

19 Very simply, the program involves having an
20 environmental monitoring program in place, and these are
21 the environmental monitoring programs that we have established
22 for ALARA and NEPA reasons over the past three years as
23 documented in staff positions several years ago, and most
24 recently in our reg guide 414, to gather the data at the
25 nearest residence, to subtract out the contribution from

1 background and other sources.

2 In most cases that is going to be one of the
3 things that causes us to spend some time in phase one.
4 I will get to that in a minute.

5 To compare the dose with the standard and determine
6 compliance, identify any additional controls that may be
7 necessary or if appropriate, possibly some additional
8 monitoring to supplement or confirm a problem if it is
9 first identified. Then to report, of course, periodically
10 to the NRC the compliance determination or compliance
11 assessments that you do as mill operators, because the
12 burden is primarily with you for that determination.

13 This is part of the package, the figures on
14 procedures that was handed out. Once we get it our project
15 managers will be reviewing your reports.

16 Of course, if compliance is determined it's no
17 nevermind. Some action would have to be taken obviously
18 where there is a potential problem that arises, or if there
19 is unusual conditions under the provisions that were
20 established at EPA in setting the standard for variance.
21 That, too, is another pathway that can be taken.

22 We expect to annual be issuing a brief report
23 that summarizes the status of the industry.

24 Let me talk about where we are headed as to
25 what we have in mind, or what our objective is. It is to

1 establish that simple standardized procedure which would
2 involve establishing some point of receptor concentration
3 or dose action levels. I am not sure what it would be.
4 It may be 25 or higher than 25 millirem, but it will be
5 developed based upon the experience of going through phase
6 one. It will be, of course, combined with a commitment of
7 specific control measures and to acknowledge that there were
8 no significant changes in the surrounding environs--that
9 there wasn't a new mine that opened up nearby and so on.

10 We expect to establish eventually some point of
11 receptor concentration or dose action levels. We would do
12 that--we would enter from phase one to phase two with some
13 license amendments, because your initial orders or licenses
14 would not be set up in such a fashion that you have such
15 levels.

16 Back to the previous slide, the trick is going to
17 be in subtracting out the other sources that are not covered
18 by the standard.

19 Greg Eadie, I will have him describe to you one
20 case that we have recently gone through where we have, in
21 fact, calculated doses of higher than 25 millirem, but through
22 observation and through evaluation of environmental monitoring
23 data and so on we have been able to determine that it is
24 most likely that it's not the mill tailings that are causing
25 the exceeding of the 25 millirem.

1 During phase one we expect to be completing the
2 implementation or the installation of environmental monitoring
3 programs that have been committed to by and large up until
4 now.

5 I think there may be only one operator who does
6 not right now have an approved environmental monitoring
7 program, that is one that is consistence in performance
8 with the reg guide and that will be done shortly.

9 During that period of time we are going to be
10 sorting out--or you will be sorting out other contributions
11 to the dose at that nearest residence.

12 We may, in certain cases, be working with you
13 to establish some short-term limited sampling and in studies,
14 but the outcome will be, or it is our objective and our
15 hope of simplified procedure.

16 Now, the orders. On December 1st they will,
17 where there is not an environmental monitoring program in
18 place, it will effectively establish one.

19 In some cases we have committed, or we have nailed
20 down our worked-out environmental monitoring programs over
21 a period of time. It has been over the past three years.
22 There may be a few that need some minor modifications to be
23 consistent with the regulatory guide.

24 We will specify where there are not environmental
25 monitoring programs in place and operating right now, we will

1 specify some time frames, dates, certain by when the
2 program has to be installed. We will be invoking quality
3 insurance requirements where they are not now invoked.

4 We will be committing operators to the dose
5 assessments that are described in the one handout, or the
6 procedure that you have a copy of, and it's Appendix A of
7 that document which effectively takes the dose conversion
8 factors from the regulatory guidance we have out on that.
9 The number on that is 802-4. I think most of you are familiar
10 with that.

11 The objective there was to try to make it as
12 simple as possible to compute these doses from the concentra-
13 tion, and to establish reporting requirements.

14 The next major category of conditions that would
15 be in these letters are call for short-term studies. Greg
16 will give you an example of what that might involve.

17 We will be looking for at each site where there
18 is not already a year's worth of meterology and met data
19 or an accumulation of a year's worth of met data, identification
20 and characterization of all significant nearby extraneous
21 sources. That is part of that sorting out that I talked
22 about earlier.

23 Over the past several years the commitment was
24 to a program for controlling the blowing of tailings and
25 dusting from diffused sources.

1 We will do what we have done in the recent
2 cases, and that is to formally require written operating
3 procedures. I think that is standard everywhere. We will
4 formall require the written operating procedures and weekly
5 inspections to confirm that those procedures are being
6 following.

7 The EPA standard is a strict one for mills. I
8 don't think I would have anybody in this room argue that
9 with me.

10 However, for the past several years we have
11 upgraded programs. We have, under the performance objectives,
12 required the control of the blowing of tailings and dust
13 control.

14 Our final regulations issued on October 3rd.
15 Again, state that requirement flexibility as to how you
16 do it. But, whatever you do, document it in some way to
17 give it a discipline.

18 I'm thinking primarily of the tailings pile. You
19 can't put an automatic control device on the tailings pile.
20 It takes management attention. It takes discipline, and that
21 is the reason for the written procedures.

22 The primary emphasis must be on a mission control
23 and secondarily on controls such as moving the fence, or
24 moving the residence; although, that may be, in some cases,
25 called for.

1 I will review reporting requirements before I
2 ask Greg to say a few words. I think during phase I you've
3 got the picture, or hopefully you have the picture of having
4 to sort of work our way through the process of implementation.
5 We are going to be learning and during that period of time
6 we are going to want more frequent reports than the semi-
7 annual report that is called for in the procedure that you
8 have.

9 Eventually when we get to phase II that will be
10 the requirement. Routine reporting would be as you get
11 the quarterly data that is required to be analyzed by your
12 environmental monitoring programs, that that would be
13 submitted to us.

14 The non-compliance reporting requirement that is
15 in the part 20 regulation change that John Hickey is now
16 finalizing would not apply. That would not apply during
17 this period.

18 However on an ongoing basis in phase II it would
19 be a requirement 30 days after identification of a problem
20 that you would report that.

21 What I will ask Greg to do is take a case, a
22 real-life case. We won't name who it is, but you can
23 probably figure out. The calculation alone of taking
24 monitoring data at the nearest residence, or even via the
25 code, you come up with doses that are in excess of 25

1 millirem.

2 I should mention something about the code.
3 We have done what is prudent in licensing, and that is to
4 use conservative assumptions and simplifications on the
5 predictive analyses that we have done.

6 There have been many cases where we have computed
7 in the licensing action a dose that is close to 25 millirem,
8 and in some cases over. But we recognize that there are no
9 simplifications in the use of the predictive code, that there
10 are these conservatisms and so we find that it's still
11 reasonable to go and making a finding that is likely that
12 the mill is meeting 25 millirem.

13 Greg, why don't you run through this case.

14 MR. EADIE: I have to work from the hand-out,
15 so I would like to start the discussion with the map. It
16 is about half-way through the first handout.

17 This procedure I am about to describe we have
18 gone through for all our license facilities. I'll take
19 the time and explain the procedures.

20 First of all, the map of the site is a typical
21 site that has many influences, some of which contribute to
22 the nearest residence exposure potential which are not
23 covered under 40 CFR 190. For example, mining activities
24 ongoing in those areas.

25 When they are around the mill site, even close

1 to the nearest receptor, you may have mine overburden,
2 poor storage pads and so forth. The mill influence and the
3 tailings piles under reg guide 4.14 will have nearby
4 particular monitoring stations. We are also working to the
5 closest receptor. In this diagram we call it a camp to
6 help particular monitoring stations set up and operate
7 continuously.

8 So, this is a typical diagram of a mill site
9 that we are looking at.

10 The next page, mildos computer code generated
11 50 year dose commitments. Let me try and describe our
12 initial assessments based on the computer code. It is the
13 mildos computer code. It is a 50 dose commitment.

14 That is for each year of exposure we project over
15 the remaining 50 years what the dose would be. We break
16 it down into two pathways. We call it the direct exposure
17 pathway due to the actual inhalation of the air-borne
18 particulates, and also external gamma radiation due to cloud
19 immersion and the deposition of this material on the ground
20 and the direct exposure to the gamma.

21 We focus on the uranium, radium, lead. We are
22 not dealing with radon and its daughters.

23 The second pathway we talked about is the ingestion
24 exposure pathway, and this is the pathway, as you can see
25 in the table, has the greatest potential exposures.

1 However, this is where the code seems to break
2 down and we have the poorest accurate assessment of input
3 parameters. For example, the met data is very limited
4 We don't have, for example, in many cases four years worth
5 of met data.

6 Also, we are finding out that the closest receptor,
7 one might have to go in and get additional met data at that
8 point.

9 We have made assumptions, for example, on the
10 vegetable intake pathway. If there is a potential for
11 locally grown vegetables, that all vegetables would be
12 grown there and consumed at that point.

13 The same for meat ingestion where you have cattle
14 grazing. You pick the highest potential grazing area that
15 the animal has the greatest up-take. The individual at
16 that local consumes that meat for the entire year.

17 So, this is the mildos of the predictive model
18 that we go through initially to give us an idea of what the
19 potential exposure at the nearest receptor is.

20 Any questions on the mildos assessment?

21 (No response.)

22 MR. EADIE: Okay, on the next page, for this
23 particular facility and several others we have been able
24 to review actual environmental monitoring data. This is
25 where the instrument and air sampler has been set out.

1 It has been running continuously. We have a quarterly
2 analysis of the samples reported.

3 We have taken a look in this particular location
4 at two off-site residences. For the air-borne particulates,
5 uranium, radium, thorium and lead, these are excellent
6 reported data now, concentration on pCi/m^3 .

7 The next one gives you the dose factors that we
8 have applied. These were also given to you in the other
9 handout which describes the procedures, that is the inhalation
10 pathway of those conversion factors.

11 You simply multiple the uranium natural, the
12 air-borne concentration, times the dose conversion factor
13 for uranium whole body and the volume is .0656. It is a
14 50 year dose commitment for one year of exposure.

15 The point here to make is that if one looks at
16 the bone or lung for example at the nearest residence south,
17 we see a value like 61 for bone and 124 for lung. This is
18 based on actual data.

19 Looking back at your map you can see it is more
20 than likely that this exposure is not caused solely and
21 not predominately by the new operations.

22 The most influential exposure pathway is probably
23 for mining activities, from transportation activities
24 throughout that area.

25 So, what we've had to do is go back to the licensee

1 and, if you will skip about two pages it is example E, we
2 have gone back trying to look at the actual data.

3 MR. MILLER: Let me back up just to talk for a
4 minute on this map. You can see that the prevailing wind
5 is out of the south, southwest, and the point of receptor
6 here is over to the right. I believe there are sections
7 there, so you are talking about a mile or more to the east
8 of the tailings pond and the mill, and on the other side
9 of a topographic high or anticline type of formation.

10 It doesn't take an expert to conclude from this
11 that the primary source for concentrations at that camp
12 are from mining activities and not from the tailings pond.

13 In addition to that, we know the conditions of
14 the tailings and by and large they appear to be--I believe
15 they are in pretty good condition. I mean, we know that there
16 is not a lot of blowing going on.

17 So, it's a case where if you calculate and take
18 the data, the raw data from the nearest residence, and you
19 calculate a problem. You can see it through this process.
20 Any reasonable person would conclude that not necessarily,
21 and most likely not.

22 Let's have Greg talk more about how we are going
23 to confirm that conclusion.

24 MR. EADIE: This is the example EMP modification.
25 First of all, to go in there and do an inventory of materials

1 in the area. For example, identify the mining areas, any
2 areas of mine over-burden or storage pads. Perhaps go into
3 characterizing by giving the volumes, the heights, the
4 concentration of radioactive materials in that area.

5 Also, we have asked the licensee to establish
6 the supplemental air monitoring program. Not an additional
7 station. Move one that is in existence for a brief period
8 of time to a location between the mining activities and the
9 closest residence as a short term sampling, five weeks,
10 maybe two months, limited analyses perhaps on uranium and
11 radium.

12 In this case since we are trying to identify
13 contribution from mining activities, or we want to look at
14 the ratios of the radionuclides, so we have asked the
15 licensee to look at all parameters.

16 As a matter of fact, if you go back to the actual
17 environmental monitoring reported data, you would see that
18 uranium is quite high in comparison to the other. It seems
19 to indicate that it's not tailings. It is probably an
20 actual material, for example, ore.

21 Back on what we have asked them to do for a short
22 period of time to help us sort out the contribution at the
23 nearest residence.

24 Correlation of met data. Here again, with the
25 intervening terrain, the mill site and so forth, we have

1 asked the licensee to put portable met station for a limited
2 time to correlate met data, wind speed and direction with
3 the actual measured air-borne concentrations at the nearest
4 receptor.

5 Of course, all of this information that we will
6 get in, we will review it and reevaluate the dose estimates.
7 That is pretty much the procedure we're going through.

8 MR. MILLER: It is awfully warm in here. Let's
9 take a break for ten or 15 minutes. This will give you
10 some time to think about what we have just presented.

11 We may have a few more things to present when
12 we come back, but after the break we will open it up.

13 (Whereupon, a short recess was taken.)

14 MR. MILLER: I apologize for the warmth of this
15 room. It is not a tactic to cut down on the number of
16 questions.

17 What I would like to do is entertain questions.
18 There is a sign-out sheet that wasn't at the door when you
19 first came in, but it is now near the door. Would you please
20 sign in on your way out or sometime before we break up.
21 I don't know how long the questioning is going to go. That's
22 really up to you. We are here to make sure that you under-
23 stand what it is we are doing to implement this standard.

24 So, as long as you desire, if it runs on for a
25 while, I think we ought to take another break, but we can

1 decide that later.

2 With that, are there any questions?

3 QUESTION: Are there any cases where the NRC
4 will take meteorological data and look at the site and say,
5 based on a mildos calculation, they show that the nearest
6 residence, wherever it is, is like 10 or 15 millirems a
7 year?

8 In that particular case will you still request
9 that we go out there and put a sample at that location in
10 order to determine the fact that it is?

11 MR. MILLER: We began about three years ago.
12 As I said before, for reasons of ALARA and for reasons
13 of our NEPA responsibilities to require environmental
14 monitoring at mills.

15 One element of that is to determine at the point
16 of nearest receptor where the potential greatest impact
17 would be, what kind of impact is, in fact, happening.

18 So, the answer to the question is that you've
19 got to have that kind of program anyway. It happens to
20 serve the purpose of determining compliance with 40 CFR 190.
21 Those are programs which were being instituted two or three
22 years ago.

23 So, the answer is we've got to have an environmental
24 monitoring program, and that includes, of course, the point
25 of receptor sample.

1 QUESTION: I notice in your handouts that you
2 are listing lead 210 which is a radon daughter. I infer
3 from that that you are going to count lead 210 for the
4 compliance of 40 CFR 190, and I wonder how that can be
5 since 40 CFR 190 excludes radon and its daughters.

6 MR. EADIES: It is also in the natural material
7 ore. As a particulate we will include it, of course recogniz-
8 ing you cannot distinguish the particulate versus the lead
9 grown in from radon and decay.

10 QUESTION: 40 CFR 190 excludes radon and its
11 daughter, and lead 210 is a daughter. How can you attempt
12 to enforce 40 CFR 190 with respect to lead 210?

13 MR. EADIE: It is also in the ore, is it not?

14 QUESTION: That may well be the case, but the
15 regulation doesn't apply to radon and its daughters.

16 MR. EADIE: Lead 210 is in the ore.

17 QUESTION: So is radon, but the regulation doesn't
18 exclude radon and its daughters except for radon and its
19 daughters which are in the ore.

20 MR. HICKEY: I'm John Hickey from NRC Standards.
21 I would suggest that we not give a final answer, because
22 I don't think that there is unanimity of an agreement that
23 lead 210 is included in 40 CFR 190.

24 Unless we could attempt to come to an agreement
25 on that, the way I would like to leave it is we expect

1 you to monitor for lead 210. My personal opinion is that
2 lead 210 is not 40 CFR 190, but it is of concern as far as
3 protecting the public from the 210.

4 Paul, would you say that lead 210 is covered by
5 40 CFR 190? I would suggest that we leave that question
6 open-ended.

7 MR. MAGNO: It is clearly ambiguous the way it
8 is stated.

9 QUESTION: I don't see that it's ambiguous. It
10 says excluding radon and its daughters. If lead 210 is
11 excluded from the calculations --

12 MR. MAGNO: I say it's ambiguous with respect
13 to the intentions.

14 MR. MILLER: In a plain reading it seems to be
15 excluded. I think that is one we will have to, as John
16 said, not give you a definitive answer right now, and we
17 will consult with the EPA as we have done all along.

18 We have laid out this program and we have kept
19 in touch with Allen Richardson and Paul Magno and the folks
20 at EPA who were responsible for the standard initially. We
21 will touch that base.

22 QUESTION: The differentiation between background
23 and particulates arising from the mill, how did you arrive
24 at that? To begin with, what was the background level and
25 what kind of variation did it have?

1 MR. MILLER: Let me attempt a general answer
2 and then, Greg, why don't you add to it.

3 Environmental monitoring program is more than
4 just a point of receptor. I'm talking now about air
5 sampling. It includes a background monitor. It would be
6 judicious in selecting a location, but you want to try by
7 that background monitor to pick up all those sources that
8 would be present in the environment near the mill, but
9 would not include mill tailings. So you have to look at
10 it on a site specific basis to determine where is the best
11 place to put that.

12 In addition, there are monitorings around the
13 tailings and around the boundary of the mill. It is a
14 combination of looking at various monitors, and knowing
15 prevailing winds on an annual average basis, on a basis
16 that's short. It is not a grab sample. It is continuous
17 monitoring.

18 You should be screening out the short-term kind
19 of effects that make grab samples not appropriate for
20 our purposes.

21 I don't know if Dan or Greg could say something
22 more specific about the general trend in the monitors in
23 this case here. Greg or Dan, do you want to attempt --
24 Wasn't there some falling off in the direction going from
25 several monitors down wind from the mining areas?

1 If it were the tailings pond or the mill, you
2 wouldn't to have the monitors further away from the miller.
3 You would have higher readings than the ones near the mill.

4 It is a process of looking not just at a point
5 of receptor, but a number of different points and not just
6 the environmental monitoring data. It is looking at other
7 things. It is an assessment of all of the circumstances
8 that are given. They are going to be required to sort out
9 and portion out the contributions to the dose.

10 QUESTION: 40 CFR excludes the contribution prior
11 to December 1980; is that right?

12 MR. MILLER: That's the way we are going to
13 implement it.

14 QUESTION: How do you determine the vegetation
15 and the livestock to what they eat? Do you take it to what
16 they ate prior to 1980, or do you go out and sample the
17 cattle now and then sample it again after December 1980?

18 How are we suppose to determine what impacts we
19 have before and after?

20 MR. MILLER: That is part of this process that
21 I'm talking about in phase I through step by step figuring
22 out how to sort these things. I can't give you a real good
23 answer right now. I haven't thought that one through, but
24 perhaps somebody else has an answer on how to do that.

25 QUESTION: During the rule making proceeding I think

1 NRC indicated that physical monitoring was not possible.
2 Has something come up that has changed this? I thought
3 NRC had indicated this was impossible to do, and I'm trying
4 to find out if something came up in the meanwhile to change
5 your mind?

6 MR. MILLER: I won't attempt to speak for the
7 people who are speaking for the NRC three or four years ago.

8 Based upon our licensing experience and based upon
9 the expertise that we have on staff and with our consultants,
10 we conclude that it is feasible.

11 You can see this program is one that is phased.
12 It is not one where we have all the answers right away. The
13 objectives are to streamline, to standardize it, simplify
14 it.

15 There is going to be some time during which we
16 are sorting things out to some extent.

17 QUESTION: I would like to explore for a moment
18 the question of your licensing experience in the past two
19 or three years.

20 How many applications for renewal of existing new
21 licenses has NRC examined in the past two or three years?

22 MR. MILLER: Ross, did you hear that question?

23 MR. SCARANO: We have gone through all but one
24 of the milling operations. It is quantified at the five
25 to somewhere around eight.

1 MR. LINEHAN: It is probably about between six
2 and eight that we have been in the process of reviewing.
3 We have two right now that are pending renewal. I'd say
4 it's about six to eight of the mills.

5 QUESTION: It is NRC's contention that it has
6 actually monitored or required the mill licensees to monitor
7 to detect how well they are presently in compliance with
8 part 190, the license renewal applications?

9 MR. LINEHAN: We have monitoring data from a few
10 sites over a period of a year or greater now, on which we
11 are making this determination.

12 MR. MILLER: What are you driving at?

13 QUESTION: All I'm trying to do is explore the
14 foundation for the statements that have been made earlier
15 that NRC has -- well, you have expressed confidence that the
16 mills will be able to obtain the 40 CFR 190 standard on the
17 basis of your experience with license renewals.

18 I was interested in seeing how much experience
19 NRC had had with license renewals and how much your confidence
20 was resting on things like mildos?

21 MR. MILLER: I think what I said is with the
22 controls that have already been committed through renewals
23 and through renewal licensing, in many cases it is just simply
24 put as the control of blowing tailings and other control
25 requirements that are consistent with ALARA under part 20,

1 and consistent with NEPA that those requirements should
2 be adequate. There are cases in our states where we have
3 analyzed the situation and should be adequate to meet the
4 standard. We can't make it as a firm statement.

5 As I said, some cases we are looking at are
6 addition studies to be done to confirm that preliminary
7 conclusion. It will require strict control of blowing
8 the tailings. It will require the sort of things that
9 have been at some mills where clearing materials have been
10 placed over embankments, embankments were made of tailings,
11 chemical stabilizers had been used, flexibility in the way
12 you do it.

13 What we are saying is with the commitments that
14 were already made, those were followed through and it
15 should be doable.

16 QUESTION: So, the NRC's position is that if this
17 licensee implement the controls that NRC is posing on the
18 license renewal process, then NRC believes that they will
19 be able to comply with part 190?

20 MR. MILLER: Subject to what I said before.
21 That's what it looks like to us. It's likely that they will.
22 The environmental monitoring programs will tell us for sure.

23 QUESTION: I would like to ask a technical question
24 as to what extent NRC has done to document the confidence
25 limits they can put on these measurements? They seem to

1 be very down in the range where they may be very difficult
2 to make up with a high degree of accuracy.

3 MR. EADIE: I will help out and I will ask John
4 Hickey to help me. I think one of the big things that
5 we would like to stress in the environmental monitoring
6 program is establishing a good quality assurance program,
7 not only on simple collection, but particularly on sample
8 analysis. We do have a reg guide on that, 4.15.

9 Perhaps if John could help me out.

10 MR. HICKEY: I will answer the questions in
11 two parts. We looked very hard at whether you could take
12 a sample and analyze it to a certain degree of uncertainty
13 within reasonable uncertainty limits. We feel that samples
14 can be collected and analyzed using good analytic techniques
15 within reasonable certainty.

16 Now, as far as our certainty that that result
17 will be translateable into a dose that a real person is
18 getting with a degree of certainty, there is much more
19 uncertainty associated with that.

20 So, when you talk about uncertainty you have
21 to differentiate between the technical analysis and the
22 conversion to a dose.

23 MR. MILLER: What we are doing is essentially
24 establishing in that Appendix A of the procedure that you
25 have which, again, is derived from or taken from our

1 reg guide on dose modeling, the dose conversion factors
2 that we are going to use.

3 So, that in a sense eliminates the uncertainty
4 as far as getting from those concentrations you measure
5 to what we're going to be looking for. Those are dose
6 conversion factors that have been in regulatory guidance
7 and have received scrutiny.

8 We feel it is a very good regulatory basis upon
9 which to be using those factors.

10 QUESTION: What I am asking for is, in fact, a
11 numerical number that you people say. When you say 25
12 millirem, based upon these measurements, to you feel it's
13 accurate plus or minus 5, 10, 15 or 100 percent, based on
14 your experience?

15 MR. HICKEY: I don't feel comfortable answer
16 that question. The issue of uncertainty has not been dealt
17 with. It is a generic issue. It has not been dealt with
18 by the commission. It is not dealt with in the regulations.

19 They say you have to meet these limits and they
20 don't say you have to meet the limits with 50 percent
21 uncertainty, or 95 percent uncertainty.

22 Because the conversion of a concentration to a
23 dose depends on assumptions as to how the material gets
24 into the body and how it behaves in the body, there are
25 uncertainties associated with that. It is difficult to

1 answer either in generic terms or specific terms.

2 MR. MILLER: In a sense our procedure mutes that.
3 In any kind of standard, any kind of radiation protection
4 standard. that's in term of the dose, you always have
5 a question of what models to use to get from concentrations
6 to dose.

7 What we have done by our procedure is to establish
8 the ones that we are going to use, we expect you to use, that
9 we can defend.

10 There is uncertainty and I guess we could do
11 studies to try to precisely determine that. By the procedure
12 you are not going to have uncertainty as to use of those
13 and how we are going to react to that, nor do I think you
14 have to worry about anybody else.

15 We are the regulatory agency. We are responsible
16 for implementing it. So, I think I would feel comfortable
17 in that sense.

18 QUESTION: This goes to the confidence that you
19 expressed in the regulation. Again you said you were a
20 responsible agency. I talked briefly with your counsel in
21 the hall, and I had some question as to the confidence you
22 have in 40 CFR 190.

23 If you have such confidence, I would see no
24 particular reason to revise 1020. Would you like to address
25 the confidence you have in EPA's rate?

1 MR. FONNER: From the strictly legal point of
2 view, the amendments of 10 CFR 20 is not a very great one
3 to persons who are licensees of the NRC, because under the
4 Atomic Energy Act we can proceed by order with respect to
5 our own licensees.

6 The 10 CFR 20 amendment is significant; however,
7 with respect to enforcement of the EPA standard in agreement
8 States.

9 QUESTION: If a facility turns in to you a
10 report that says they cannot comply with that standard,
11 what would be your procedures? Are you going to issue a
12 shut-down order? What will you be doing there?

13 MR. MILLER: First of all, I will repeat something
14 I said before. The primary burden of determining compliance
15 resides with you. You've got to meet the limit.

16 In the interest of trying to be sure of consistency
17 and reduce uncertainty, we have prescribed the formulas that
18 can be used, our calculating doses.

19 As I mentioned on one of the viewgraphs, when
20 you see that you've got a dose higher it is up to you to
21 sort out the extraneous sources. Once you have isolated
22 an idea of what's coming from the mill, you determine you
23 have, in fact, taken steps, reasonable steps, to control
24 the source.

25 After that kind of study the is provision for

1 variance, but it is under unusual type of situation. I
2 forget the exact words, but we would not entertain a request
3 or submittal that did not clearly indicate that a serious
4 good faith attempt was made to control the emissions.

5 I don't know if I'm answering your question, but
6 I can't give you an answer, quite frankly, on a generic
7 basis anymore than I have.

8 QUESTION: Your proposed regulations would have
9 been 10 CFR 20 on coal for the licensee to ascertain the
10 extent of exposure of individuals, levels of radiation and
11 concentration of radioactive materials involved, the cause
12 of the exposure, and the plan to implement the course of
13 corrective action to assure against a recurrence. That's
14 all that is required for this 30 day report.

15 Does NRC have any experience to believe that a
16 mill could provide all that data and prevent a recurrence
17 in 30 days?

18 MR. MILLER: Go back to what I said about reporting
19 requirements. We are trying to recognize--I think the
20 program we have outlined recognizes the kinds of concerns
21 that you are raising. During phase I there is a lot of
22 sorting out to do and we don't think that you can get it
23 down to a point where you can quickly determine whether you
24 are in compliance or not.

25 During that period of time we expect -- Say the

1 regulation that requires a 30 day notification would not
2 be applicable during that period of time until we can
3 amend the licenses and get very specific about it and get
4 that more simplified procedure, it is not going to be possible
5 to do that.

6 After that time we hope that the program will be
7 tailored to allow for rapid determination of a problem if
8 it exists. That is one of the objectives.

9 After that time we feel it is.

10 QUESTION: At present what level exposure exists
11 which would necessitate a report to NRC of non-compliance?
12 Do you know?

13 MR. MILLER: During this phase I, as I said before,
14 there will be none.

15 QUESTION: Is there anything in the present
16 regulations which imposes on uranium mill a requirement to
17 report over exposure at any particular level?

18 MR. HICKEY: Yes. There are requirements. First
19 of all, there are requirements for various facilities depending
20 on the facility. They might have to file a 30 day report
21 at levels of a few millirem a year for nuclear power reactors
22 for uranium mills. They are only subject to requirements
23 that apply to all licensees that include short-term emission
24 levels, that are more on the order of rates of 100's of
25 millirem per year.

1 The reason we have been going to the lower levels
2 is because 40 CFR 190 talked in terms of doses of a few
3 millirem a year. There are no radiation standards in
4 existence anywhere that I know of other than 40 CFR 190,
5 and some requirements for reactors that talk in terms of
6 doses of a few millirem a year.

7 QUESTION: I guess -- It seems to me it's hard
8 to put your finger on what the problems are, but we've got
9 a set number, 25 millirem, to meet. We've got uncertainty
10 in the statistical conference of the monitoring programs.

11 I don't think anybody is sure that you can separate
12 out what comes. We haven't resolved the questions of what
13 we are going to do with radon yet.

14 If there is no environmental monitoring program
15 in place, we are going to use the predictive models which
16 are recognized as inadequate. Yet, we still have to meet
17 a 25 millirem standard.

18 It sounds like it is completely open-ended and
19 you probably won't have -- I think it's not accurate to say --
20 You are asking us to meet a 25 millirem standard and you are
21 stating whether it is statistically valid or not is irrelevant.

22 MR. MILLER: I don't agree with your characterization
23 as being uncertain as what you're saying. There is
24 uncertainty in any kind of measurement you make, and you face
25 it in meeting any standard, whether it's 40 CFR 190, whether

1 it's part 20, any of the EPA standards.

2 What I am saying is that always exists, and what
3 we have tried to do in recognition of that is to lay out
4 a program that defines this is what we, the NRC, is going
5 to expect as being that reasonable assurance that is required
6 in part 20.

7 QUESTION: What I am saying is right now that
8 reasonable assurance is pretty much whatever you decide.
9 There isn't any criterion.

10 Take for example radon citation from MSHA. They
11 have a variability factor figures in. It's in policy
12 statements and all the operators know when they are going
13 to get cited.

14 You look at sampling methods with OSHA. They
15 have variability factors built in. You are telling us
16 here we don't have any idea what the variability is.

17 MR. MILLER: I can't say what that phase II
18 program is going to look exactly like. We try to characterize
19 its basic elements, but it very well may have factors of
20 uncertainty associated with it.

21 In the meantime we feel we have an adequate
22 regulatory basis upon which to proceed through a phase I,
23 not to shut people down on December 1st, not to take
24 precipitous actions. We feel we have that basis.

25 During that period of time there is not going

1 to be a requirement for people, as soon as they run out
2 and calculate 125 millirem from the monitoring data at the
3 nearest point of receptor, to report themselves.

4 At least in our cases it looks like there are
5 not mills exceeding the standard. I think our program,
6 the phase I that I've talked about, accounts for the kind
7 of concern that you are raising.

8 QUESTION: I'd like to address a question to
9 Mr. Fonner. I did not understand your real statement
10 you made relative to 10 CFR 20 amendment prior to implementation
11 of 25 millirems. Could you repeat that?

12 MR. FONNER: What I said was because we could
13 proceed by order under the Atomic Energy Act, this program
14 can be implemented with respect to NRC licensees without
15 the necessity of amending 10 CFR part 20.

16 However, we stand at a different posture with
17 agreement State licensees. They are not our licensees, and
18 it is the expectation of EPA that the standard would be
19 enforced in agreement States by the States.

20 However, we are, in a sense, an intermediary
21 between the United States Government and the agreement States
22 through the agreement, through the formal understanding,
23 by which we relinquish regulatory authority.

24 The agreement States feel that they would prefer
25 to have the 40 CFR standard incorporated in our regulations

1 before they would proceed with their implementation of the
2 programs.

3 So, that is a matter of the understanding between
4 NRC and the agreement States under the agreement.

5 QUESTION: Are you saying the next step is you
6 would have to incorporate it as a change to 10 CFR 20?

7 MR. FONNER: Yes, Sir. Mr. Hickey is working on
8 a rule to that effect right now. It also includes some
9 reporting requirements which would be applicable to the
10 implementation.

11 MR. HICKEY: I can elaborate on that. Licensing
12 orders have already been written for fuel fabrication plants
13 incorporating the requirements of 40 CFR 190 and slapping
14 the 30 day reporting requirement on it.

15 If part 20 is never amended, all licenses are
16 still going to be amended incorporating the requirements
17 of 40 CFR 190.

18 Now, for mills reporting requirements are not
19 going to be 30 days initially. The other reason for revising
20 part 20 is that if we don't revise it, then you can read
21 all the way through part 20 and never see 40 CFR 190
22 mentioned.

23 It's a help to somebody reading the regulations
24 to have a cross reference to 40 CFR 190 just notifying them
25 they are subject to those provisions.

1 QUESTION: Can you talk more about the amount
2 of time which you anticipate we are going to be in this
3 phase I, and also is that going to depend upon each licensee
4 and how they progress, or is it going to be a generic into
5 that period of time?

6 MR. MILLER: I showed on the view graph it's
7 going to be a variable time. They are far enough below
8 the standard, they do not suffer source problem, and it
9 should be a short period of time. At mills where there are
10 more extraneous sources, it may take longer. Maybe a year,
11 maybe longer than a year.

12 We have tried to and have an obligation to not
13 let it string out forever. We are going to put into these
14 orders dates by when these programs have got to be operational.

15 We are asking for this three month quarterly
16 reporting requirement during phase I so that we can actively
17 follow it and make sure that these programs are progressing,
18 and that we get to phase II as soon as possible.

19 It is a variable kind of thing.

20 QUESTION: I would like to stop back on this
21 reporting requirement point, because my reading of the
22 current regulations is that licensees are required to file
23 a non-compliance report if they see some 10 times level
24 specified in 10 CFR part 20. NRC is preparing an amendment
25 to part 20 right now which would require a licensee to report

1 non-compliance with the precise 25 millirem level specific
2 in part 190.

3 That is an extraordinary departure from past
4 practices, and I don't see that there are any health and
5 safety reasons for requiring that kind of reporting require-
6 ment. I have not heard anything here today that suggests
7 to me that uranium, in any way, would be compared to comply
8 with that 30 day period, or it would be possible for them
9 to comply with that 30 day period. Since part 190 itself
10 nowhere requires this report requirement, I wonder what
11 basis, in fact, NRC has, if any, for imposing it?

12 MR. MILLER; I don't think you did hear what I
13 said before, because I did say during this phase I it will
14 not exist.

15 In this level that we specified, this action
16 level would not necessarily be 25 millirem.

17 Now, I won't attempt to answer the other questions
18 about 10 times on one standard and not here.

19 MR. HICKEY: I explained that 40 CFR 190 is
20 an extraordinary regulation, and the Commission's response
21 to regulations which were strict doses to a few millirem
22 a year, we've been doing it for five years. It is our
23 response to do it for 40 CFR 190.

24 The 40 CFR 190 is considered a public health
25 and safety regulation and we are obligated to enforce it.

1 If we don't have a reporting requirement we have no way
2 of knowing whether or not the licensees are abiding by
3 40 CFR 190.

4 QUESTION: You requiring a licensee to monitor
5 and under the regulations, as I read them, you have access
6 to their books, their reports and records?

7 MR. HICKEY: That's right. We have 20,000 licensees
8 that keep records.

9 QUESTION: You have about 25 uranium mills and
10 those are divided between the agreement States and NRC?

11 MR. HICKEY: That's right. We are talking about
12 uranium mills at this meeting, but we are talking about
13 inspectors that have to visit 20,000 licensees.

14 QUESTION: Given the situation where you have
15 several facilities that might be in close proximity to one
16 another, how does a licensee in one particular facility
17 consider the activities of the other facilities, if at all?

18 How does the NRC do it, and how does the NRC
19 insure that they are in phase I, and later, that the actions
20 that these several facilities considered together and
21 without duplicating expenses and so on to the licensees?

22 MR. MILLER: Let me first of all say that most
23 mills are not so close together that the contribution from
24 other mills to its nearest residence, and correct me if I'm
25 wrong here-- I believe that there is not -- The additional

1 contributions are very secondary from other mills. Almost
2 exclusively the contribution from the mill-- I don't think
3 it is going to be a big problem. It doesn't appear to be
4 a big problem.

5 However, the standard is such that you've got to
6 consider it. I think how we sort that out is by the same
7 kind of process that you will be sorting out other mining
8 sources.

9 I think it's a hypothetical and I can't give any
10 real clear answer on it right now.

11 QUESTION: My question is related. You stated
12 that the burden is clearly upon the licensee to determine
13 compliance and radiation is radiation.

14 There are 40 CFR 190 sources, and there are
15 non-40 CFR 190 sources. By what standards are they to
16 determine what is and what is not a 40 CFR 190 source?
17 Something measurable that they can rely on. Do you have
18 any idea?

19 MR. MILLER: The purpose for talking through
20 this case is to show you how, on a site specific basis,
21 that kind of sorting out process will happen. There are
22 enough -- In cases where there is an extraneous source, it
23 is normally quite a few sources and there are large area
24 sources in many cases. It is not a thing that lends itself
25 to some sort of generic formula. It's got to be a

1 site specific kind of program, and I think this environmental
2 monitoring programs with the monitors around the tailings
3 pile, and the monitor at the nearest residence should build
4 a strong enough case so that it's not so uncertain that we
5 would be able to meet that reasonable assurance burden.

6 QUESTION: That poses a problem. We are talking
7 about 25 millirem standard. He just said over here that
8 this is a very difficult standard. We have a set number.
9 You are talking about with a whole lot of sources. Just
10 sorting all these things out and coming up with 26.5 or
11 24.9, I mean, I don't think anybody believes you can do
12 that.

13 There are those sources of uncertainty that I
14 talked about because we have talked about them here today,
15 and there isn't any resolution to those. The operator has
16 no idea, and you say we would be working for maybe a year
17 with some guy trying to figure out a problem.

18 The example you gave may be an easy one compared
19 to some of the others. Let's say meterological conditions
20 are a little bit more variable, or something of that nature.
21 What is going to happen to this guy if a year later you are
22 still getting readings that are over 25 millirem based on
23 all different kinds of samples?

24 If you are saying you are not going to shut him
25 down, that's fine. Let's say that in the letter. Let's say

1 we're not going to shut people down while we are working
2 with them until we have given them adequate time to go
3 through all the reasonable testing procedures to see what
4 the problem is.

5 MR. MILLER: I would be repeating myself if I
6 tried to give much of an answer to that. The program is
7 calculated and intended to minimize uncertainties to provide
8 the kind of reasonable assurance that I talked about.

9 We feel on the basis of what we know right now,
10 we feel it's likely that we will be able to do it. Frankly,
11 we may learn differently a year or so from now, but from
12 what we know right now it appears as though it is something
13 that is practical.

14 QUESTION: To be more specific and get away from
15 some of these variables, as I understand it absent some
16 order affecting our license we can proceed on the assumption
17 that we have an approved monitoring program?

18 MR. MILLER: John, maybe you can --

19 MR. LINEHAN: You indeed do have an approved
20 monitoring program. Any facilities that don't before
21 December 1st, we will be contacting you. This will be
22 addressed in the audit if you do not have an approved one.
23 If it isn't addressed, you've got one that is approved.

24 MR. SCARANO: If you don't mind, I would like
25 to say a few words. I know that the people up front have

1 gone through this once. Let me try one more time, because
2 I hear words like, "What's going to happen when it's shown
3 ultimately that a mill may not meet that 25 millirem."

4 We feel confident with the control measures that
5 are already required as a result of the ALARA and NEPA reviews.
6 Those control measures are what we have the confidence in
7 in controlling the mill to meet that standard. It is not
8 the monitoring program, it is the control method.

9 Now, if indeed through the phase I that we wind
10 up at the end where a few years down the path after sorting
11 all this out there is a mill that has a contribution in
12 excess to 25 millirem, what do you look for? You look for
13 another control mechanism, an added control mechanism, not
14 shutting down the mill.

15 You would be called upon to say okay, we have
16 isolated the source. We know we can do this, and that
17 will reduce the contribution to that 25 millirem.

18 The goal is to reduce the radiation hazard to
19 the public, not shutting down the mill.

20 QUESTION: Am I to understand that what Mr.
21 Scarano has said that during the one year interim period
22 while you are working with mill operators that no mill
23 will be shut down?

24 Let's address ourselves specifically to the
25 question of shut-down and what the effect of showing

1 non-compliance through these variable measures will be?

2 MR. MILLER: The letter speaks for itself.

3 QUESTION: The letter says precisely that, "We
4 do not expect during the period to enforce the standard
5 through a shut-down or some other type of procedure."

6 I want to know specifically does that mean you
7 will not, during that one year period, shut down any mill?

8 MR. MILLER: Our licensees are committed to the
9 program of controlling blowing of tailings. I don't think
10 in the past three years or so where we have had these
11 requirements in licenses that we have shut down anybody.

12 There may be cases where we have in an inspection
13 found it as a deficiency, in looking at that requirement,
14 whatever procedure was developed by the operator to
15 accomplish that.

16 My own opinion, and Ross can add to this, I
17 don't expect during this period of time that we are going
18 to have a basis necessarily to shut anybody down. It
19 doesn't mean that during this time we wouldn't, against
20 those license conditions which require an operator to be
21 carrying out these controls, cite him and list as a deficiency, in
22 an inspection and enforcement action, cite him on not meeting
23 those criterion.

24 Until we get to phase II it is going to be
25 difficult to have basis upon which to shut somebody down

1 in 40 CFR 190 non-compliance.

2 MR. SCARANO: I would think we would say in
3 working through our licensees and looking at the preliminary
4 compliance, we would have no basis in the world for
5 closing down any of our licensees.

6 There are certainly some mills that look like
7 they may be on the borderline, and that is the process of
8 sorting out, you know, where are these contributions coming
9 from.

10 Again, let's look at what happens down the path.
11 We will be looking at the control measures, are they working,
12 and do we need more control measures to meet that standard.
13 That is the bottom line.

14 QUESTION: Are you going to be sending something
15 to the agreement States on the same lines and suggesting
16 similar procedures?

17 MR. MILLER: I am sure, consistent with our
18 normal policy, we will be and have in the past worked on
19 informing the agreement States how we are proceeding on
20 this, and I would expect that we would do -- This has been
21 somewhat of an evolutionary process.

22 We started a year or so ago to go through these
23 assessments to develop a reasonable rational scheme that
24 addresses the kind of concerns that you raise. We have had
25 the same ones, and we try to build that in.

1 I can't say that there is any specific meeting
2 in mind, but I am sure that there will be some presentation
3 with the agreement States to help them with the same -- or
4 to ensure that they are taking the same kind of course,
5 same, kind of approach.

6 QUESTION: When do you think that will take
7 place?

8 MR. MILLER: I can't say. We have kept them
9 informed through sending them copies of materials and
10 whatnot. We don't have a date or anything.

11 MR. FONNER: The agreement State program is
12 handled by another office in the agency, and I don't
13 think there is anybody here from that office.

14 MR. KENDIG: I'm John Kendig, Office of State
15 Programs.

16 We have been tracking what is going on with regard
17 to 40 CFR 190, and the people on the site keep us informed
18 and we, in turn, provide that to the agreement States.

19 Whether or not Hub is going to provide this
20 pack of information or not I'm not sure. I suppose they
21 will. That information, the two documents plus the letter
22 from our legal department, will be going down to the
23 agreement States.

24 Whether or not there will be any separate
25 discussions, I don't know at this time. I would imagine

1 there would be.

2 QUESTION: I'd like to know what you are going
3 to consider your value, or how you would define the background.
4 Is it an absolute, or is it a value plus or minus?

5 Second, I would like some references so we can
6 determine how you determine the dose conversion factors.

7 MR. MILLER: The ones I mentioned before, it's
8 the regulatory guide.

9 A VOICE: Those dose conversion factors have
10 been changed. The new ones are in the code package.

11 MR. MILLER: In the mill dose code package
12 that we documented and distributed.

13 The other question was about the uncertainty on
14 background. I expect that it will be subject to about the
15 same errors in background measurement as you will from the
16 monitoring samples around the mill, and it will be a straight
17 subtraction.

18 QUESTION: Are you talking about a 96 percent
19 confidence level?

20 MR. EADIE: The determination is no different
21 from the point of the nearest receptor or the monitors
22 near the tailing piles. You simply collect the sample and
23 analyze it.

24 QUESTION: This compliance determination procedure
25 says draft on it. Are you passing this out to us now

1 because it's almost a non-draft?

2 MR. MILLER: The reason I put that there is
3 because there are some minor differences between what is
4 in this package that I just presented in viewgraphs and
5 what is in that. It is largely more just emphasis in
6 the way it is presented.

7 I expect to emphasis, although it's in there,
8 more of the phased process. So, I didn't want that to be
9 taken as the gospel. That will be a reference in the orders
10 that we make, and it will be final then.

11 QUESTION: Does NRC have any estimates of the
12 cost of the monitoring and reporting requirements that it
13 is imposing through the regulatory guide and through its
14 imposed amendment to impose on the uranium mills?

15 MR. MILLER: Let me say a general statement and
16 then I will ask John or Greg to make some statements about
17 specific parts of your question.

18 We don't feel that the level of monitoring that
19 was established under the part 20 ALARA and NEPA requirements
20 of the past three years ago. The increment above that for
21 40 CFR 190 is significant.

22 There is, during this initial phase, some studies
23 that will be conducted, primarily short-term studies. We
24 expect to be looking to streamline the environmental monitoring
25 and reporting requirements as best we can over time.

1 Certainly the reporting requirements, the
2 determination of compliance, this action level, is a kind
3 of simplification that we are looking to provide.

4 Now, the costs --

5 MR. HICKEY: There have been cost estimates made
6 of 4.14 and those were provided to everybody that commented
7 on 4.14 which included some new licensees. It was also
8 provided to the American Mining Congress.

9 There are not requirements in 4.14 that were
10 added because of 40 CFR 190. All of those monitoring
11 requirements stood on their merits.

12 The reporting estimates were done as far as the
13 actual cost of preparing the report, not the cost of
14 identifying the causes of failure to comply, not the cost
15 of assembling the information you need to comply with 40 CFR
16 190, but the cost of filing the actual report with NRC was
17 deemed to be insignificant.

18 The reason for that was that we don't expect
19 after this phase--You know, we are not going to be having
20 this after that. We don't expect very many of these to be
21 filed, and those that are filed are not going to be very
22 expensive.

23 QUESTION: I would like to mention another
24 potential element of uncertainty. NRC has just put out its
25 proposed general statement of policy procedure for enforcement

1 noting raises and penalties and all that available.

2 It also mentions that they are going to emphasis
3 prompt and vigorous enforcement in dealing with persons who
4 are unable or unwilling to comply with NRC requirements.

5 It is the Commission's intend that an enforcement
6 program be marked by an aggressive enforcement strategy and
7 seek more use of stronger enforcement measures with particular
8 attention to detail, high standard of complience will be
9 achieved. Furthermore, licensees who cannot achieve and
10 maintain adequate levels of protection will not be permitted
11 to operate.

12 That sounds somewhat inconsistent with phase I.

13 MR. MILLER: I think I have given the basis for
14 the approach we are taking during phase I. As I said, we
15 are confident. The basis for our confidence will be laid
16 out in the report that we issue on December 1, that there
17 is a defensible regulatory basis upon which to go through a
18 phase I.

19 I think it is a policy of INE, but
20 INE has a problem too. In order to enforce that regulation
21 they have to show non-compliance.

22 We have the same problem you have. To show non-
23 compliance we are going to have to have some kind of a
24 formula to go through.

25 So, when your problems are solved so are ours.

1 In the interim it looks like what is going to happen is
2 that we are going to inspect solely on the license additions
3 that are put on your license by NSS. Those will be judged
4 on our basic inspection. It looks like they will all end
5 up as deviations or something like that. It depends on
6 how serious we find that you are not following that particular
7 addition.

8 We are not going to be shutting down mills. We
9 are going to try to get this regulation incorporated into
10 the mill.

11 MR. TRUBATCH: With regard to the general statement
12 of policy, that is a proposed general statement of policy
13 regarding enforcement.

14 Some of you today have received your letter which
15 has been read by the Commissioners which address the
16 particular enforcement policies for phase I for this
17 program.

18 MR. MILLER: It is specific to this problem today
19 and I think it should be taken as superceding the general
20 statement of policy.

21 QUESTION: This is a follow-up question to the
22 earlier one that I asked about cost of monitoring. I
23 have regulatory guide 4.14 in front of me, the provision
24 dated April 1980, and I note for the record that it expressly
25 calls for pre-operational sampling to detect compliance

1 with 40 CFR 190, and also operational sampling to detect
2 compliance or non-compliance with that regulation.

3 I ask my question again, has NRC made any
4 estimates to determine the incremental cost of that kind
5 of monitoring?

6 MR. MILLER: Clearly that program serves the
7 purposes -- Those monitoring requirements serve the purpose
8 of compliance determination with 40 CFR 190.

9 We have contacted the various people that we
10 wanted to talk to. Is there anybody that wants to meet
11 with us in addition to those who have been contacted? If
12 so, you don't have to raise your hand now, but seek either
13 John Linehan or myself out and we will arrange a time to
14 meet with you.

15 I appreciate your coming. If there are any
16 follow-up questions, don't hesitate to call this branch.

17 Thank you.

18 (Whereupon, at 11:30 a.m. the meeting was concluded.)

19 * * *

REPORTER'S CERTIFICATE

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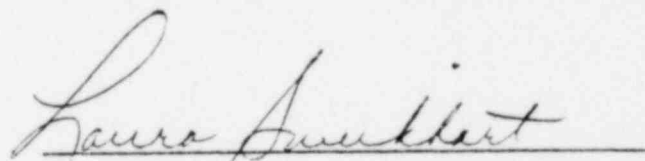
CASE TITLE: Meeting: 40-CFR-190

HEARING DATE: November 14, 1980

LOCATION: Silver Spring, Maryland

I hereby certify that the proceedings and evidence herein are contained fully and accurately on the tapes and notes reported by me at the hearing in the above case before Nuclear Regulatory Commission and that this is a true and correct transcript of the same.

Date: November 17, 1980



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