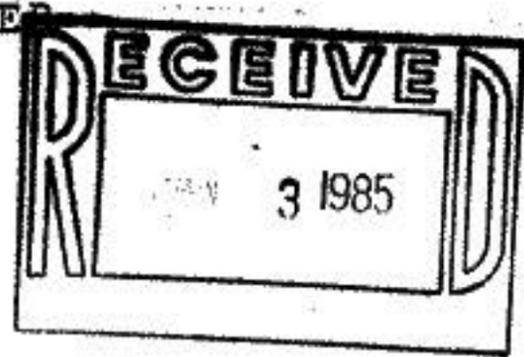


1 NEW YORK STATE : DEPARTMENT OF HEALTH

2 -----

3 IN THE MATTER
4 OF
5 MEETING
6 CONCERNING



7 Determination of criteria and strategy having
8 to do with habitability of Love Canal, Niagara Falls,
9 New York.

10 -----

11 MINUTES OF MEETING held at the
12 Red Jacket Inn, Niagara Falls, New York, on Wednesday,
13 November 14, 1984, commencing at 8:30 a.m.

14 CHAIRMAN: THOMAS WELTY, Ph.D.

15 PANEL MEMBERS: PAUL WIESNER, Ph.D.
16 DEVRA LEE DAVIS, Ph.D.
17 MARTHA FOWLKES, Ph.D.
18 PATRICIA MILLER, Ph.D.
19 FREDERICK G. POHLAND, Ph.D.
20 I. GLENN SIPES, Ph.D.
21 WARREN WINKELSTEIN, Ph.D.
22 DANIEL VANDERMEER, Ph.D.
23 MICHAEL STOLINE, Ph.D.
ROBERT HUFFAKER, M.D.

1 CHAIRMAN WELTY: Fred, I think we are
2 ready to get started.

3 I hope that you have all received the
4 fifth draft of the criteria and have had a chance
5 to review it before this meeting. I hope that it's
6 also very near to the final draft.

7 My thought about the process involved in
8 completing it was that we would take input from
9 today's meeting, incorporate it into a sixth draft
10 and also attach all of the appendices that are
11 listed. We will be getting help from CH₂M Hill,
12 from EPA, from other agencies to complete all of
13 those appendices that are listed. So that the
14 next draft you receive in the mail should include
15 both the habitability criteria and all of the
16 appendices and we would ask that you review that
17 sixth draft with the appendices, give us your
18 comments so that then we can come out with the
19 final draft or the final document.

20 In the final document we realize that
21 there may be some of our consultants who do not
22 agree with the document the way that it's written.
23 Any opinions of those consultants that don't agree
with the document as written will be attached to

the final document.

1 Also we would like to mention for clarification
2 tion purposes, the role of the consultants that
3 we have hired. We have hired you to help us draft
4 this habitability criteria document and we have
5 all been very impressed with the assistance that
6 you have given us. I think we have made a lot of
7 progress. None of us really realized how
8 complicated this task would be, I think, when we
9 naively agreed to participate in the process but
10 we worked on it together and the document reflects
11 a lot of clear thinking on your part and a lot of
12 assistance to us in determining the habitability
13 of the EDA.

14 There is a question as to whether or not
15 we will need another meeting and I would like to
16 have you be thinking throughout the day as to
17 whether or not we can wrap it up today or if there
18 is any reason to reconvene as a group to go over
19 this sixth draft or whether we can handle this
20 process by mail.

21 At this point I would like to have
22 Dr. Huffaker explain how he envisions the applica-
23 tion of these criteria just so that we are all

1 clear on how this process will be implemented from
2 the point of view of the State of New York.

3 DR. HUFFAKER: Okay. I have a couple of
4 announcements to make before we get into that.
5 Dr. Chalmers I believe is at the APHA in California
6 and Dr. Stolwijk is strikebound at Yale,
7 Dr. Silbergeld we understand is in Australia and
8 Dr. Devra Davis called last night and said that
9 because of personal problems that she would be
10 here, but late, and asked me to provide you with
11 a couple of items, food for thought, which she
12 would like to have you thinking about before she
13 gets here and then she will defend it further and
14 I said I would.

15 She, in the first one was that, where
16 there are existing standards, ambient standards,
17 standards for any chemical such as EPA, OSHA and
18 so on, if these are exceeded, that the house or
19 neighborhood would automatically be excluded from
20 habitation. I told her that we had attempted to
21 use the OSHA standards last time and it was
22 rejected for various reasons and she said she
23 understood that but she still thought that if such
standards existed, they ought to be considered

rather than just a comparison.

1 The second one was, when we choose the
2 comparison area, to be very careful that it need
3 not have a major landfill it to disqualify it just
4 for comparison. That might disqualify it, just a
5 few barrels.

6 I would be working on that particular part
7 of it and I'm not sure how we are going to resolve
8 her problem on that.

9 Regarding the flow of documents and the
10 application of the habitability criteria, you
11 experts will guide us in the preparation of a
12 habitability criteria document. That then will go
13 to CDC and DOH and we will add the appendices,
14 whatever else we feel is needed, keeping it in the
15 guidelines that you provide to us. That will then
16 be given to the TRC which is our parent organiza-
17 tion and this is of importance to us as a whole.
18 If they approve, it will go out for peer review
19 providing that can be arranged. It will be
20 returned from the peer review to the TRC with
21 whatever comments the reviewing body feels
22 appropriate and it then would, depending on what
23 the comments were, if it passes the review, it

1 would go from the TRC to the Commissioner of Health,
2 Dr. Axelrod or whoever is in that position, as a
3 recommendation from the health agencies to him as
4 far as habitation here and it would be up to him
5 then to accept, reject it. If he accepts it, then
6 it would be an implementation of these criteria
7 using data that either exists or would be generated.
8 We have not gone into detail about how this would
9 be done, whether this would be an oversight
10 committee and we have talked generally about this,
11 it would be desirable to have an oversight group
12 which would include community representation to
13 observe the application of the data and the
14 criteria to make the final decisions on habitability.
15 That is what you wanted.

16 CHAIRMAN WELTY: Yes. The question has
17 come up as to whether any of the consultants might
18 be utilized in that oversight group and I wondered
19 what your feeling would be on that.

20 DR. HUFFAKER: I haven't talked to the
21 Commissioner about this particular aspect. It
22 would certainly be desirable if members, the cur-
23 rent group of experts would participate in the
application of the habitability criteria. The

1 alternative is to find others and put them through
2 the same educational process that you have been
3 subjected to for the last year.

4 So, if we can leave that open and perhaps
5 invite some of you back or all of you, however you
6 wish, to work with us on that aspect of it. Do
7 you have suggestions or---

8 CHAIRMAN WELTY: Is there any further
9 discussion from the consultants at this point on
10 the opening statements that we have made about
11 the process?

12 DR. POHLAND: What would happen if the
13 documents didn't pass? He said if it did pass,
14 it goes to the Commissioner.

15 CHAIRMAN WELTY: If it doesn't pass the
16 technical review committee.

17 DR. POHLAND: All right. What happens
18 then?

19 DR. SIPES: The technical review or
20 peer review?

21 DR. HUFFAKER: At each level.

22 DR. POHLAND: You know, you presumed
23 everything went.

DR. HUFFAKER: Yes. We present it to the

1 TRC and if the TRC finds something totally objec-
2 tionable that it wants changed, the TRC would do
3 this. It would not come through as your change,
4 that would be the TRC change and then it would go
5 out to peer review with those changes in it. The
6 same thing if the peer review process found that
7 there was something totally overlooked or totally
8 objectionable and then it would be a satisfactory
9 document if these things were resolved, then I
10 think the agency, the TRC would be looking to see
11 how we might resolve those problems.

12 One of the things we talked about was
13 that it would be desirable to have this come out
14 so that any changes that were made, that they
15 would not be represented as your changes, that the
16 document that you provide or that you helped pre-
17 pare is the draft we are working now and except
18 for the changes that would be made by the agencies
19 involved, would have to be identified in that
20 manner.

21 CHAIRMAN WELTY: Maybe I should ask at
22 this point, what would you prefer if there were
23 objections from the TRC or peer review? Would you
want to be notified of those objections and

1 participate in a correction of the identified
2 problems?

3 DR. POHLAND: Just knowing how difficult
4 it is sometimes to get unanimity of agreement on
5 some of these things and since we will, whether we
6 like it or not, be identified with the whole
7 decision process, it would seem appropriate to at
8 least allow this group to have the opportunity to
9 respond to whatever develops and that might be
10 very productive. Sometimes in the review process,
11 because maybe the way it's delivered or what kind
12 of stage is set forth, some of the deliberations
13 that led to the decision that was made are not
14 clearly understood by the reviewers and I think
15 it's probably productive to allow for this group,
16 should such a decision be made, to respond to this
17 just to help the process along some. It would, of
18 course, depend upon what the magnitude of the
19 change might be and so forth.

20 CHAIRMAN WELTY: Do the other consultants
21 have similar feelings about that, you want to be
22 able to respond to any comments that come in?

23 DR. SIPES: Well, I agree with Fred, his
last statement that, you know, those within reason,

1 I think that there will be some comments or
2 revisions that may just require a change but then
3 there are some that should be discussed. So, that
4 is what you said before and I think I agree with
5 that. I think also we realize that there should be
6 some modifications over time as more people look
7 at this and more data become available, then there
8 are going to be necessary revisions and changes.
9 So, this was just to get a direction going, I
10 believe, with the understanding that various other
11 groups would have inputted in different directions.

12 DR. HUFFAKER: I would anticipate that
13 the changes would probably be directed at the
14 appendices. The main document sets forth the
15 direction you want to go and how you want to get
16 there and then the details are in the appendices,
17 and at that point is where people may have, I
18 would think, would be most likely where we would
19 identify problems and those may be correctable
20 without doing violence to the basic document.

21 DR. SIPES: If some of the premises we
22 set out, you know, if other people agree with some
23 of our decisions and assumptions, fine, and there
is the possibility that another group would say

no, we can't go this route.

1 DR. POHLAND: I guess as we develop a
2 position on the criteria, we are also consciously
3 or maybe unconsciously thinking about implementa-
4 tion. So, when that step comes along and there is
5 difficulty in developing maybe a unanimous approach
6 to implementation, then I think the consultants
7 may well be of some use in trying to help direct
8 this.

9 CHAIRMAN WELTY: Well, we can make a
10 commitment to send all of the comments that we
11 receive to you and ask for your response to those
12 comments. Do you have any problem with that, Bob?

13 DR. HUFFAKER: No.

14 CHAIRMAN WELTY: Any other discussion on
15 these opening items?

16 DR. WINKELSTEIN: I am a little concerned
17 still about the minority opinions as it were. I
18 think in your appendix one, you probably ought to
19 indicate the total number of meetings that were
20 held and I think you should put in parentheses
21 after each member how many meetings they attended,
22 because I think you are going to have problems
23 because probably there will be--there may be

1 individual statements by even those who concur
2 with whatever decision we come up with but the
3 validity of the strength of those opinions will be
4 important considerations, I mean, important
5 considerations will be how involved the person was
6 in the whole process.

7 CHAIRMAN WELTY: We can easily do that.
8 Do the other consultants agree with that suggestion?

9 DR. SIPES: I think in the spirit of what
10 he said, I would agree.

11 DR. POHLAND: I agree. It needs to be
12 handled rather diplomatically as you well know.

13 DR. WINKELSTEIN: Well, I noticed what
14 you said here was, that had attended one or more
15 meetings. I was looking for some names that you
16 could drop off the list since they didn't attend
17 even one meeting.

18 CHAIRMAN WELTY: Okay.

19 DR. WINKELSTEIN: But you see, it is
20 likely or I could conceive of a situation where
21 the probability of a minority opinion would be
22 inversely proportion to the participation and that
23 might be a misleading commentary on the product.

CHAIRMAN WELTY: The other suggestion has

1 been to attach your curriculum vitae to that
2 document and I am not sure if we have everyone's.
3 Anita, do you know if you have on file all of our
4 consultants' curriculum vitae? I know you have
5 some of them but---

6 MS. GABALSKI: Whatever was sent to every-
7 body in general, CH₂M Hill would have provided them
8 to me as well. I couldn't tell you if I have
9 everyone.

10 CHAIRMAN WELTY: Okay. Well, we will try
11 to check that and if we are missing any curriculum
12 vitae, we will get in touch with you and request
13 that you send it in for inclusion in this document.

14 DR. POHLAND: It might be well to update
15 it anyway. You know, I don't know when or if they
16 even got one from me but it seems to me this was
17 forever when we did it.

18 CHAIRMAN WELTY: Would you be able to
19 send in another one?

20 DR. POHLAND: Sure. I think it might be
21 wise to have everybody present a current one. You
22 are going to get a wild assortment of documents
23 and formats. You might want to also consider just
what you want as far as format for the curriculum

vitae.

1 DR. HUFFAKER: Why don't I write a letter
2 and ask if you want to update the one you sent in.
3 We would also know by that time who has sent them
4 in and could update or send one or leave the one
5 stand.

6 DR. POHLAND: I guess, Bob, what I am
7 saying is that there is some advantage to having
8 uniformity of documents and I suspect if you get
9 one from each of us here, they will all be a wild
10 assortment of different ways and formats present-
11 ing things. To make the document, the overall
12 document, more useful, it may be that some of this
13 can be abbreviated and more to the point. I'm
14 not sure everybody cares about some of the things
15 I put on my biographical sketch for certain reasons.

16 CHAIRMAN WELTY: We can make an attempt
17 to editorialize your curriculum vitae if that is
18 agreeable to everyone.

19 DR. SIPES: Just make it look better.

20 DR. POHLAND: There might not be anything
21 left.

22 CHAIRMAN WELTY: I would like to make a
23 few comments about the agenda at this time. We

1 have a few changes. We will start off with the
2 QA/QC, Dan Vandermeer has been the CDC representa-
3 tive on the QA/QC task force and he will make that
4 report in a few minutes.

5 The second item deals with remediation
6 and Joe Slack is here now but there will be one
7 other person coming from the DEC at about 10:30.
8 So, we will try to get started on that portion of
9 the agenda around 10:30 as soon as that person
10 arrives.

11 Dr. Sipes will discuss the selection of
12 the indicator chemicals.

13 EPA will discuss the dioxin sampling plan.

14 Item number five deals with the habitable
15 neighborhoods and Dr. Fowlkes, would you be able
16 to include in that discussion your analysis of the
17 neighborhoods when we come to that point in the
18 agenda?

19 DR. FOWLKES: You mean in terms of selec-
20 tion or---

21 DR. WELTY: Yes, the selection and then I
22 think that the public will have some comments. At
23 least we should provide the opportunity for them to
comment at that time.

1 DR. FOWLKES: All right. I had assumed
2 that, in fact, what we sent regarding the selection
3 of the neighborhoods had been circulated.

4 CHAIRMAN WELTY: It has been. It has
5 been circulated. So, presumably everybody has
6 seen it and should be familiar with it but if there
7 is anything that you wish to present to the group
8 in addition to that, I would like to give you an
9 opportunity.

10 DR. FOWLKES: No. I would rather have it
11 the other way around, if there is anything the
12 group would like to address, they could address it.

13 CHAIRMAN WELTY: Okay. We will cover
14 those issues when we come to point five on the
15 agenda.

16 Point six has to do with peer review.
17 We have had some problems identifying a group to
18 peer review this work so we will cover that probab-
19 ly after Dr. Davis arrives, since she is an
20 employee of NAS.

21 Dr. Huffaker will discuss the selection of
22 control neighborhoods and we will go through the
23 documents to see if there are any changes that you
want to make for the sixth draft and then we will

have a final question and answer period at the end.

1 In terms of lunch, do we have any plans
2 for lunch? Off the record.

3
4 (Discussion off the record.)

5
6 CHAIRMAN WELTY: All right. I would like
7 to break for lunch right after we discuss the
8 neighborhoods. Okay. First on the agenda is an
9 update on the activities of the QA/QC task force.

10 DR. FOWLKES: Could I just ask one thing,
11 since I came in late? When we received the com-
12 ments on the habitability criteria, ours apparently
13 didn't get to you in time to attach. We sent you
14 also a set of comments on draft four of the habit-
15 ability criteria.

16 DR. HUFFAKER: I didn't see them.

17 DR. FOWLKES: Well, it was sent.

18 CHAIRMAN WELTY: I didn't see them either.

19 DR. FOWLKES: Well, we were very conscien-
20 tious and even brought copies because I was quite
21 confused about how it happened that they weren't
22 attached with Dr. Stoline's.

23 CHAIRMAN WELTY: I never received them.

1 DR. HUFFAKER: It's possible that they are
2 on my desk in the papers but I don't think so. We
3 will look into that. May I have a set?

4 DR. FOWLKES: Yes, sure.

5 CHAIRMAN WELTY: Could you give one to
6 each of our consultants? We can make more copies
7 if it's necessary.

8 DR. FOWLKES: Well, I ran off some yester-
9 day because I was concerned.

10 CHAIRMAN WELTY: This is the original
11 here.

12 DR. FOWLKES: No, this is off the computer.

13 CHAIRMAN WELTY: Now, could you give a
14 copy to Anita. Maybe she can get some Xeroxes made
15 for the public too.

16 DR. FOWLKES: It's just to make the record
17 complete.

18 CHAIRMAN WELTY: Yes, sure.

19 DR. FOWLKES: We did do our work.

20 CHAIRMAN WELTY: We appreciate that.

21 Any other comments?

22 (No response.)

23 Okay, Dan, could you update us on the

QA/QC?

1 DR. VANDERMEER: By way of review, on
2 September 20th, a Quality Control/Quality Assurance
3 plan was put in final form and widely distributed
4 to each of the scientists and to the members of
5 the community and that plan called for a phased
6 approach to Quality Control and Quality Assurance,
7 documentation of all of the environmental monitor-
8 ing that has been done in the Love Canal area.
9 To date, the first phase of the activity was
10 simply to go to each of the data sets, a data set
11 being an easily identifiable set of environmental
12 monitoring data and to verify the existence of
13 certain items that would permit one to do a Quality
14 Control/Quality Assurance assessment of that
15 particular data set.

16 All of the phase A or first level Quality
17 Control/Quality Assurance has been done now by
18 the contractor, CH₂M Hill and on October 29th,
19 they distributed a package to again each of the
20 consulting scientists, members of the TRC and
21 others and the community that show the results of
22 the phase A effort by data set and I presume that
23 each of the scientists has a copy of that at this
point. If not, we will make sure you have a copy

1 of it and I believe there are copies in the back
2 of the room.

3 The phase B project is now underway.
4 Phase B is an attempt, again, by the contractor
5 to EPA, CH₂M Hill, to collect all of the documents
6 identified in the first phase review of each of
7 the data sets which may not already be on hand and
8 then have experts in the pertinent media, that is,
9 people who have expertise in doing laboratory
10 analysis with environmental media such as air,
11 drinking water, groundwater, sediment, soil and
12 water in surface and sumps, review the sample
13 collection, the sample handling, laboratory
14 analysis, data reduction and storage of the
15 sampling effort.

16 At this point that activity is going on
17 and should be finished in the very near future.
18 That phase B review will be complete.

19 Since October 29th there have been tele-
20 phone conversations and then yesterday afternoon
21 here in Buffalo there was a meeting of the folks
22 who have been working on the issue of Quality
23 Control/Quality Assurance. In that meeting we
discussed the status of the Quality Control/

1 Quality Assurance review activity and I have given
2 you an update on this status and we discussed two
3 other things of importance that I would like to
4 report on.

4 There was some question as to whether or
5 not the Quality Control/Quality Assurance effort
6 ought to go forward in light of the fact that it
7 would appear that the habitability criteria would X
8 call for new sampling in both the EDA and in a
9 control or control areas and the question was,
10 ought one continue to do a rigorous Quality Control/
11 Quality Assurance assessment on "old data" that
12 would not be used presumably in the decision
13 related to habitability.

14 It was the consensus of the group that
15 there was a usefulness for Quality Control/Quality
16 Assurance assessment. First, presumably it would
17 help establish sample design for the comparison
18 approach if one knew what data had already been
19 collected and what confidence one could put into
20 these data. It may be useful in helping to select
21 certain marker or indicator chemicals that could be
22 tested and in the comparison approach envisioned
23 in the habitability statement, it might be useful in

1 time trend analysis studies to say, knowing what
2 kinds of changes in various environmental media
3 may have occurred over time. It may help either
4 validate or invalidate the 1980 EPA environmental X
5 monitoring which has been subject to quite a bit of
6 criticism by the Office of Technology Assessment
7 and by the National Bureau of Standards and it might
8 be helpful in testing the criteria for habitability.

9 So, we felt there was strong argument for
10 continuing the Quality Control/Quality Assurance
11 activity. So, Quality Control/Quality Assurance
12 review will go forward.

13 The second thing that was suggested
14 yesterday and I believe agreed to by the group in
15 discussing Quality Control/Quality Assurance is that
16 we ought to follow the original September 20 plan
17 and that is to go forward with the very rigorous
18 Quality Control/Quality Assurance effort of certain
19 environmental, in particular, those environmental
20 testing programs taking place since 1980. That is
21 since the time that the remediation or the major
22 remediation effort has been in place.

23 There are thirteen different environmental
testing programs that have been put in place since

1 1980. Each of these has within it a number of data
2 sets as I defined earlier.

3 Our goal is, on the long term, to do a
4 rigorous Quality Control and Quality Assurance as
5 described in phase C of the plan for all data sets
6 collected since 1980. The timetable for that is
7 approximately one year from this month. That is the
8 goal.

9 The immediate objective is to focus on
10 doing a very rigorous Quality Control/Quality
11 Assurance of the kinds of data sets that might be
12 most useful in the application of the criteria for
13 habitability, that is to say, we would like to
14 select certain data sets that are closest to the
15 concept of the criteria for habitability and do a
16 very rigorous Quality Control/Quality Assurance on
17 those data sets and specifically we would like to
18 concentrate on the data sets that were carried out
19 by the Department of Health in support of the
20 Department of Law, State of New York litigation,
21 that's a testing of soils in the EDA. Two data
22 sets related to soils that were part of the EPA
23 1980 environmental monitoring, one done by Southwest
Research Institute, that is the analytical lab and

the other done by Gulf South Research Institute
and these contain many of the chemicals in soil
that have been mentioned as potential marker
chemicals or indicator chemicals in a comparison
program and then the DEC groundwater monitoring
effort will be subjected to rigorous quality
control. The quality control will be---the quality
control assessment will be for all 113 organic
chemicals, including pesticides that may have been
tested in any of these four data sets.

There is another advantage to doing a
focused, rigorous attempt on these first four data
sets and that is to serve as a pilot for our long
term objective of doing Quality Control/Quality
Assurance on all data sets collected since 1980.
If it turns out that in our phase C effort to do
Quality Control/Quality Assurance reviews that it's
not possible from these data sets which have clearly
passed through the phase A and B review, it may
indicate to us that a rigorous Quality Control/
Quality Assurance can't be done in all data sets.
It would also give us a sense of how long it would
take and how much manpower it will take and how much
effort it will take to do the QA/QC reviews on these

1 things. We are also very interested in focusing
2 on two things in this very rigorous Quality Control/
3 Quality Assurance particularly in the pilot phase
4 and that is to make sure we understand exactly
5 what the method detection limits are for each of
6 the data sets and to develop as best we can bias
7 and precision estimates for those data sets for
8 those results.

9 CHAIRMAN WELTY: Skip Ellis from CH₂M Hill
10 is here. Skip, do you have anything you want to
11 add since you have been working very intensively on
12 this aspect?

13 MR. ELLIS: No, not really. I thought Dan
14 summarized it very well from the meeting yesterday.

15 CHAIRMAN WELTY: All right.

16 DR. POHLAND: Were there any sets on air?

17 MR. ELLIS: Okay. One of the pilots
18 related to air and we are going to do one EPA soil.

19 DR. POHLAND: Which one of the two?

20 MR. ELLIS: I think it's SWRI on soil.

21 DR. VANDERMEER: That is the Southwestern
22 Research Institute was the contractor to EPA. Now,
23 when was that decision made? It was made sometime
between---

1 MR. ELLIS: No. That was presented
2 yesterday, wind, air and soil from the EPA, DEC
3 water and the DOH soil.

4 DR. VANDERMEER: I'm sorry, I misunderstood.
5 I thought there were three soils and no airs.

6 MR. ELLIS: No.

7 DR. VANDERMEER: I'm sorry. Thanks for
8 correcting me.

9 CHAIRMAN WELTY: Any other comments on the
10 QA/QC?

11 DR. FOWLKES: I would just like to clarify
12 for myself, I am a little embarrassed to ask, the
13 use of these data sets will not substitute for on
14 the ground literal sampling with respect to these
15 habitability criteria?

16 DR. VANDERMEER: No.

17 DR. FOWLKES: Okay.

18 DR. VANDERMEER: This is a link to the
19 independent activity.

20 DR. FOWLKES: But it is not a stand-in for X
21 going out and collecting the samples in the EDA
22 and the control.

23 DR. VANDERMEER: No, it is not and that is
why I said there was some debate about whether we

1 should even go back and try to assess the quality
2 of the previously collected data sets because some
3 folks said why bother if that isn't really part of
4 the habitability. We came up with some pretty good
5 arguments that would support going in and doing
6 QA/QC, recognizing that those data will not be direct-
7 ly used in any habitability decisions.

8 CHAIRMAN WELTY: If there are no other
9 comments, I would like to move on to item three,
10 selection of indicator chemicals and Dr. Sipes.

11 DR. SIPES: Well, I think the statement
12 you just heard relative to the plans for the QA/QC
13 have an important bearing on actually the selection
14 of the indicator chemicals and I would just like to
15 make that at the very beginning. I think at the
16 last meeting I raised the issue that I had some
17 concern about selecting chemicals when the data
18 had not been subjected to QA/QC and I think that
19 perhaps these final chemicals that would be selected
20 may be somewhat depending on the QA/QC of the data
21 but I would like to report that on October 31, that
22 Dr. Stoline at my and Dr. Welty's request, we had
23 a meeting with CH₂M Hill to review the various types
of data that were available on the data sets that

1 were available in order to better key in on these
2 indicator chemicals and at that time we requested
3 some further documentation as to the types of
4 chemicals, the data, and we set up some criterion
5 and I should point out that CH₂M Hill has been very
6 helpful in compiling this data on a short term
7 request and it is still being subject to review but
8 what we had set up at that meeting was to have
9 computer printouts of the various samplings that
10 had occurred since 1979 and attempted to set up some
11 criteria for selection of chemicals.

12 First of all, the chemical must have been
13 selected in the EDA, it must have been detected in
14 a significant concentration in the Canal, and we X
15 attempted to show a greater concentration in the
16 Canal versus the EDA and if possible, the chemical
17 should be Love Canal specific and I think the word
18 "specific" is tough to define but we would like to
19 have information indeed, it had been placed into the
20 Canal but you find an actual Love Canal specific
21 chemical may be difficult since many of these
22 chemicals are widely used and then the air, soil,
23 sediment, groundwater, sump pump and other data
were evaluated and the following data sets were used:

1 the 1980 EPA environmental monitoring study, the
2 Malcolm Pirnie study, the New York State Department
3 of Environmental Conservation well monitoring and
4 their litigation data, the E. C. Jordan sample study,
5 soil study, the Hooker air sampling, the New York
6 State Department of Environmental Conservation air
7 sampling, EPA storm sewer sampling and dioxin
8 sampling data.

9 So, what has occurred within the last two
10 weeks are these large computer printouts of data
11 that are available but we are making progress in
12 that with some of the criteria that Skip Ellis and
13 others and we have set up, we are getting a feel
14 for those chemicals which will meet certain criteria
15 and unfortunately we don't have those completely
16 worked out, but looking over this list then yester-
17 day, for marker chemicals, we come up again with
18 chemicals that were similar to the ones that were
19 on some of the other lists and let me just mention
20 a few of these but let me stress again that we are
21 still reviewing these data.

22 For example, we found that the chlorotoluene
23 isomers and chlorobenzene may be marker chemicals
for ambient and indoor air.

1 Now, I did not have chlorotoluene on the
2 original list but that seems to be a good marker
3 chemical according to the list of criteria that
4 were set up.

5 Soil has not changed too much. We had
6 benzene hexachloride, a variety of chloride benzene
7 hexachlorides on the list and chlorobenzene and, of
8 course, dioxin was on the list. So, again, it's
9 chlorinated aromatics that are appearing and for
10 groundwater, the only chemical that really came out
11 again was the benzene hexachloride.

12 So, I guess what I am saying is that I
13 think we have been on the right track at least for
14 the selection of marker chemicals. We may at this
15 time want to have the criteria document state that,
16 or our habitability document state what our criteria
17 are for selection of the chemicals and then allow
18 the actual chemicals to be selected with the input
19 of the QA/QC and further input of data rather than
20 being chemical specific at this particular time
21 since I just received some more data too relative
22 to chemicals that were in the Canal.

23 So, these lists are changing and therefore
I have some concern about making a statement,

1 absolute statement that these particular chemicals
2 should be considered.

3 So, with that I can entertain some dis-
4 cussion or answer some questions.

5 CHAIRMAN WELTY: There were a couple of
6 points I would like to bring out in that the criteria
7 document that pertained to this, page 5, based on
8 our meeting in Reston, it included a statement and
9 it's the next to the last sentence in that first
10 paragraph, it says this approach assumes that Love
11 Canal indicator chemicals can serve as sentinals
12 of contamination of the EDA resulting from chemical
13 migration from the Canal and I think that kind of
14 captures the rationale for this approach. We are
15 trying to select, as I understand it, these
16 chemicals because they are surrogates of contamina-
17 tion from the Canal and that is the rationale for
18 including them in this criteria document.

19 Then on page 9 we come down to the media
20 and Love Canal indicator chemicals to be selected
21 and we talked about their presence. The criteria
22 are their presence in Love Canal, their presence
23 in the EDA, their possible migration from the Canal
to the EDA, and we said example concentrations in

1 the Canal higher than the EDA and concentrations
2 in the EDA higher than control and in reviewing this
3 data yesterday, we realized that the control was
4 based in some cases on only five samples. So, we
5 felt that that particular portion of the criteria
6 should probably be eliminated and that we base it
7 only on the gradient from the Canal to the EDA
8 where we have more adequate numbers of samples.

9 There was a fourth criteria that was also
10 suggested at our discussion and that was that the
11 chemicals have been identified as a Hooker chemical.
12 That was also felt to be a criteria for inclusion
13 as an indicator chemical. Again, I don't know if
14 you want to elaborate on either of those two points
15 further.

16 DR. SIPES: I think what we want to make
17 sure that everyone realizes is why we are focusing
18 on chemicals that were in the Canal and were found
19 in the EDA and I think that that increases our
20 confidence for the remediation effort, et cetera,
21 that if we have ubiquitous chemicals, then we are
22 going to sort of have a bias when it comes to
23 setting up our criteria for our decision tree and,
therefore, we want to---are there any questions?

1 So, that is what I wanted to stress, that
2 we were using these as surrogate chemicals relative
3 to the remediation efforts and I think that is the
4 number one criteria and if we have a series of or
5 a group of ubiquitous chemicals, then we are never
6 going to meet our statistical criteria for a dif-
7 ference between the EDA and the control area.

8 Therefore, that is why we are putting our
9 efforts into determining, are they dumped in the
10 Canal, can we document that, have they been identifie
11 in the EDA and is there some sort of evidence for
12 migration.

13 DR. STOLINE: I think maybe that portion
14 of our document should be maybe elaborated just a
15 little bit. I feel that maybe what, referring back
16 to page 9, the paragraph you were talking about
17 here, the statement about, you know, looking for
18 marker chemicals that are higher in the Canal and
19 the EDA, that is fine, but looking at the criterion
20 that the prevalence be higher in the EDA than the
21 control, I think we ought to leave that in and then
22 amplify that a little bit to say that we are going
23 to use this criteria to try to eliminate the
ubiquitous chemicals, but also state in there that

1 the data collected in the control regions is sparse
2 compared to the data that we have from the Canal
3 and the data that we have from the EDA, that some-
4 how we will use this criteria if applicable in the
5 cases that we have data collected.

6 CHAIRMAN WELTY: Okay.

7 DR. STOLINE: But I don't think you can
8 make that EDA versus control comparison as often
9 as you can, say, the Canal versus the EDA and when
10 I say "comparison," I don't mean a statistical
11 comparison, I mean the quantity of data that you
12 have, you are limited by that.

13 DR. SIPES: One of the major problems with
14 the control is the limited number of samples that
15 were taken.

16 DR. STOLINE: Right, and also you are
17 looking at this strictly one data set, the EPA
18 data set, and when you look at the other ones---

19 CHAIRMAN WELTY: No. The printouts that
20 he has presently include other data sets as well.

21 DR. STOLINE: Okay. Let me ask you this:
22 I wasn't familiar with the fact that the Malcolm
23 Pirnie or these other data sets that have been
mentioned here actually had control.

CHAIRMAN WELTY: They don't.

1 DR. STOLINE: Okay. That is what I was
2 saying. So, the comments about the EDA versus
3 control is only really relevant I think for that one
4 data set, that is the EPA data set. So the other
5 data sets that you are using in trying to identify
6 marker chemicals, you can't even do that because
7 you don't have control data.

8 DR. SIPES: You are right. There are other
9 data sets but not for the control.

10 DR. STOLINE: That is right. That is my
11 understanding, that the only control handle we have
12 is from that EPA 1980 data.

13 CHAIRMAN WELTY: So, your suggestion is
14 that that sentence read "And concentrations in the
15 EDA higher than control when adequate data is
16 present to make that comparison."

17 DR. STOLINE: Yes and some notion that we
18 are trying to eliminate ubiquitous chemicals.

19 CHAIRMAN WELTY: I don't know how many
20 cases there was, how many cases there were adequate
21 data, though.

22 DR. SIPES: For---

23 CHAIRMAN WELTY: For making any comparison

between the EDA and the control.

1 DR. SIPES: Well, our suggestion last
2 night was to have the data reanalyzed, eliminating
3 the control to see if we would have more chemicals
4 fall out to be potential marker chemicals. We need
5 to look at that. So now we have it with the control
6 data in and we need to find it with the control data
7 out because some of the statistical determinations
8 that would be determined by the sample size and
9 they may be eliminated because of this large stan-
10 dard error, the large error.

11 DR. HUFFAKER: We still could design a
12 sampling for the new control area, though, so we
13 could obviate some of those problems by taking an
14 adequate size sample control.

15 CHAIRMAN WELTY: I'm not sure that that
16 would help you, though, in selecting the indicator
17 chemicals.

18 DR. HUFFAKER: No. I'm just mentioning
19 that you still---you can't drop the control because
20 there were only five. There won't be five in the
21 next one. So, if you have chemicals that you like---
22 I may have misunderstood your reason for not wanting
23 to talk about it or use the control because they

were so small?

1 DR. SIPES: The number of control samples
2 that we have had to compare to the EDA or to compare
3 to the Canal are usually five or less samples taken
4 in a control area. So, originally we wanted to have
5 the EDA having a higher concentration of this
6 chemical than a control area and if you set that
7 up for statistical analysis, oftentimes you will
8 have 30 samples or 50 samples in the EDA and five
9 in the control, and then when it sets up as statis-
10 tical, are these different, the standard error is
11 very large.

12 DR. WIESNER: Can I just ask two questions?
13 One thing that might help the people who are out-
14 side this group reading this would be, and it may
15 clarify what you are speaking of, controls taken
16 previously and it is not part of this comparative
17 approach. I mean, I think you are using a compara-
18 tive approach and one has the impression that you
19 might be talking about the controls. This is
20 actually using existing data.

21 CHAIRMAN WELTY: This is the 1980 EPA
22 controls we are talking about.

23 DR. WIESNER: So, it is going to be using

1 that data to try to predict what or try to indicate
2 what chemicals you should use in the control.

3 The second comment is to Glenn, a question,
4 where you say you don't want to be specific on the
5 chemicals, aren't there some chemicals in which you
6 could say are clearly going to be in now?

7 DR. SIPES: I think this list that essen-
8 tially it was the list that was developed before and
9 it has held up even through the tests that Skip did
10 and there may be a couple more we could add but
11 indeed, as I said, all the benzene hexachlorides
12 come out every time we do an evaluation and
13 chlorobenzene seems to be good for both air and
14 soil and we had the dioxin for the soil and then
15 as I pointed out, I got some additional information
16 yesterday that suggests a couple more chemicals
17 like for air, the isomers of chlorotoluene which
18 you have there.

19 DR. WIESNER: I was just suggesting that
20 you could say these are clearly in and with further
21 analysis you may want to add others rather than
22 not to list any.

23 DR. SIPES: I think I would be about ready
to say that from all the help I have had in looking

1 over these particular chemicals, a couple others
2 that were listed on here were the chloronaphthalenes
3 but these were found in various types of sediments.
4 So, these are still being evaluated but they look
5 promising.

6 DR. POHLAND: I guess one of the points
7 that is being made here is that we should be care-
8 ful, I think, that we don't make the document so
9 open ended that there is no view of control of how
10 this thing will actually materialize when the
11 implementation stage comes into play.

12 While you are doing that, Tom, you men-
13 tioned in two parts of this document, this notion
14 of migration. Implicit in that is that a migration
15 by transport through a medium. Is that what you are
16 implying or is it any method whereby chemicals
17 from the Canal may have appeared in the EDA?
18 Migration generally infers a transport through an
19 environmental phase like the groundwater and things
20 like that. If you are intending to also consider
21 the possibility of physical displacement of
22 materials, then maybe we ought to modify the way we
23 say it by saying migration or displacement because X
I think in our deliberations in the past, at least,

1 we talked about the possibility of things being
2 removed from the Canal site and put somewhere else
3 and I would submit that that might might be an
4 important point in the final analysis when one tries
5 to interpret, should some of these things be found
6 somewhere and the notions of migration mechanisms
7 defy the possibility of it migrating through the
8 soil or however, whatever environmental phase you
9 want to talk about.

10 CHAIRMAN WELTY: So, if we change that
11 sentence to read, on page 9, their possible migra-
12 tion or displacement from the Canal to the EDA,
13 that would cover that.

14 DR. POHLAND: Sure. Also on page 5 I
15 guess that is.

16 CHAIRMAN WELTY: From chemical migration X
17 or displacement. So, we will include that in the
18 next version then.

19 DR. POHLAND: Yes. I think inevitably,
20 should you find something out there that defies our
21 notions about the way it might be mobilized in the
22 environment, then we have got a problem just with
23 the notion of migration.

CHAIRMAN WELTY: Nancy Kim, toxicologist

from the State of New York is with us today.

1 DR. KIM: I just have one comment on the
2 use of the concentration in the EDA being less than
3 the control area in selecting marker chemicals.
4 It seems to me that when you are saying that the
5 levels in the EDA have to be less than the levels
6 in the control area for marker chemicals, you are
7 already assuming a relationship that exists between
8 the EDA and the control area. I was wondering,
9 isn't that---it seems to me that that is what we
10 are trying to eventually determine and should that
11 be considered as a reason why you shouldn't use that
12 criteria?

13 DR. SIPES: I'm not sure I understood that.

14 DR. KIM: If the marker chemicals are sup-
15 posed to determine whether or not the EDA, the
16 levels in the EDA are greater or less than or equal
17 to the levels in the control area, and as one of
18 your criteria for selecting marker chemicals you
19 are saying that the level in the EDA have to be
20 greater than the levels in the control area already
21 and are you biasing your---that is just a comment.

22 DR. SIPES: No, that is a very good comment
23 and that may be another reason for eliminating that

1 comparison. First of all, the sample numbers are
2 very small and then again, you are setting up that
3 criteria already. So, I didn't hear the first time
4 what you were saying and I agree with that. I think
5 that may be worthy of some more discussion.

6 See, initially we had the data from the
7 EPA data and it was all broken out in that way and
8 it seemed to fall in that indeed these may be good
9 marker chemicals because they were following this
10 pattern, but that is a very good point.

11 DR. WINKELSTEIN: Also along that line,
12 though, you pointed out that some chemicals will be
13 known to have been deposited in the dump site and
14 even if they haven't been identified in the EDA up
15 to this point, they still might be chosen as marker
16 chemicals, especially if they are relatively easy
17 to measure and important from a toxicological point
18 of view. You don't want to eliminate such marker
19 chemicals, do you?

20 DR. SIPES: No.

21 DR. WINKELSTEIN: Let's assume for the
22 moment that something happened and the system failed.
23 You certainly would want to be looking for that
chemical, wouldn't you?

1 DR. SIPES: Well, we have tried to, as we
2 pointed out earlier on, we wanted to have a series
3 of chemicals that might meet some criteria that
4 would allow for routine and more frequent monitor-
5 ing and having a greater assurance in the data than
6 where we stood with looking at a large number of
7 chemicals with a smaller number of samples. So,
8 your statement there, and we did get, just did get
9 the list where these are chemicals that have been
10 dumped in the Canal and Hooker has at least agreed
11 to that, that these chemicals have been placed in
12 the Canal. So, here again may be some important
13 data that would allow us to set up a marker chemical.

14 DR. WINKELSTEIN: Well, for example, you
15 would have dioxin as a marker chemical whether or
16 not you identified it in the EDA.

17 DR. SIPES: Well, there is a reason for
18 that.

19 DR. WINKELSTEIN: The wording should
20 reflect that.

21 DR. STOLINE: I want to make a point with
22 respect to some of the chemicals, I'm not a chemist
23 but they are labeled like heavy metals, like lead,
mercury, zinc, copper, silver and so on, that are

1 truly ubiquitous in all three areas, at least with
2 the EPA data and it seems to me that we do need to
3 have something either in the document that we are
4 looking at here, the fifth draft or in supporting
5 documentation that states clearly the criteria of
6 why that was not included as a marker chemical
7 because it certainly is very prevalent in the Canal,
8 certainly very prevalent in the data that is col-
9 lected in the EDA and the data that I have looked at
10 in the control, it's there too. So, somehow we do
11 need to, I think, somehow establish some rationale
12 for why those chemicals are not included as marker
13 chemicals and why others are.

14 DR. SIPES: I think that was---had been
15 discussed that it would be part of the appendixes
16 as to why we had eliminated a large number of
17 chemicals so that when we went out for review, it
18 would be obvious that if you were looking at mercury
19 in the EDA and mercury in the control area and they
20 were essentially equal, then that would not be a good
21 marker chemical because they are of a ubiquitous X
22 nature. So, I think we have plans to have an
23 appendix that would document the selection of the
chemicals and the nonselection of chemicals because

1 that has to stand up to people who would be looking
2 at this data.

3 CHAIRMAN WELTY: Just to follow up on your
4 point, I think the chemicals that we are consider-
5 ing here are non-TCDD chemicals. So, we can clarify
6 that I think simply by adding that modifier to the
7 LCIC, in other words, say non-TCDD Love Canal
8 indicator chemicals were selected on the basis of
9 review of environmental data.

10 DR. WINKELSTEIN: What does TCDD stand for?

11 CHAIRMAN WELTY: TCDD is dioxin, tetra-
12 chlorodibenzodioxin. So, I think that those cri-
13 teria that we applied were applied to all the
14 chemicals that were measured with the exception of
15 dioxin and dioxin was included for other reasons.
16 There were not sufficient samples tested in the
17 EPA study and there are considerations related to
18 the toxicity that went into the decision to include
19 dioxin.

20 DR. SIPES: Well, that is an action level
21 for dioxin and it falls into not the comparative
22 approach but the risk assessment action level
23 approach.

CHAIRMAN WELTY: Right.

DR. KOLAK: Could I make a comment, please?

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CHAIRMAN WELTY: Dr. Kolak from the
Department of Environmental Conservation, State of
New York.

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DR. KOLAK: Your discussion relating to
the trace metals as a possible use as an indicator
chemical, we have been monitoring that for the past
years through the treatment plant in the actual
sludge or the oil that was separated out and we
analyzed for what we called the trace metal priority
pollutants, about a dozen odd metals, including
copper I believe and cadmium, lead, things like
that.

13
14
DR. SIPES: And mercury.

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DR. KOLAK: And these were usually below
detection limits, so much so that for a six month
period, that several years ago we terminated that.

18
19
20
So, if you don't find it in the sludge,
the presence, is it necessary to look for it in the
EDA area? Because, it appears that it's not arising
from the site in terms of migration.

21
22
CHAIRMAN WELTY: Would that include analysis
for mercury?

23
DR. KOLAK: Yes.

CHAIRMAN WELTY: And that was also below
1 the detection limit?

2 DR. KOLAK: Yes and that is in the portion,
3 the very large computer printout that has been
4 distributed to the committee and it may be compared
5 in there but that was one reason why we discontinued
6 monitoring those trace metals. We expected to do
7 them maybe once every six months as a check but we
8 were doing it on a weekly basis at the plant and
9 other than iron going through the plant, all the
10 trace metals were from the laboratory pretty much
11 at a minimum detection limit.

12 DR. POHLAND: But you have to separate out
13 something that is transported in the liquid phase
14 and that which may reside on the soil phase, for
15 instance. A lot of these chemicals will, in fact,
16 be, in fact, be rather firmly fixed on the soil
17 matrix. So, not necessarily does it follow that if
18 you didn't find it in your sludges at the treatment
19 plant, that presumably it got there by virtue of
20 transport through the liquid transfer mechanism
21 will you not find it somewhere else. I think,
22 however, the comments that were made with regard to
23 why we may not use that in the analysis and

1 monitoring relate to the fact that it has been
2 found or these things have been found all over the
3 place and it would be very difficult to make some
4 kind of comparison.

5 So, I think it's a little unfair to presume
6 something from a washing process that may not wash
7 off the materials that are there.

8 DR. KOLAK: Well, what I'm saying, Fred,
9 is that there has been inferred in the past that
10 some of the material was dumped there, they were
11 like organic metal complexes, pesticide in nature
12 and in which case, then the metal would be tied up
13 in the organic matrix and to date, we have not been
14 able to show that.

15 DR. POHLAND: Provided it can get out of
16 the soil matrix in the first place.

17 MR. SLACK: This is in the non-aqueous
18 phase, right?

19 DR. KOLAK: That is correct. It doesn't
20 mean that soluble salts were deposited in the land-
21 fill which then would leach out through the aqueous
22 phase as Fred was discussing and then perhaps it
23 migrated in the past, but even in the analysis of
the aqueous phase in the plant, the levels are

1 extremely low. I am not aware of any of the trace
2 metal data that shows that it was derived from the
3 point source of the landfill itself unless somebody
4 has some new data that shows contrary. That is just
5 a point to consider.

6 DR. SIPES: We still have the metals on the
7 list that are going through to the computer printout
8 and if a particular metal meets a criteria that it
9 is higher in the Canal and it is appearing in the
10 EDA, then that metal still shows up and we will
11 evaluate that because one of the reasons was one
12 metal may have come through our criteria and we
13 may want to re-assess that.

14 DR. WIESNER: Tom, two additional points:
15 One, it would be useful in the document to be sure
16 that we are distinguishing the use of Love Canal
17 indicator chemicals for the purposes of a comparative
18 methodology in contrast to the use of these chemicals
19 as ongoing monitoring of remediation and I think
20 some of the discussion has gotten those two objec-
21 tives mixed up and it may be, I mean, it may be that
22 somebody will in the future use the Love Canal
23 indicator chemicals that you select for monitoring
ongoing remediation and maintenance of the treatment

1 plant but this document is related to using those
2 as a good selection for sentinel for comparison of
3 the EDA with the control area. I think that is what
4 we mean by what is in this document.

5 The second point is, it may be helpful to
6 clarify whether these three or four, if you added
7 the Hooker chemical thing in the criteria, are
8 criteria that have to be met for each chemical or
9 does a chemical make the list if it meets only one
10 of the criteria? It's not clear to me in the way
11 it's written about whether, for instance, chloro-
12 toluene, if it met the first three and didn't meet
13 the four or met the first two and didn't meet the
14 third, would it still make the list? This is a
15 requirement that it has to be all of those criteria
16 met? What did you mean when you used these
17 criteria? Did they all have to be met for the
18 chemical to make the list?

19 DR. SIPES: Well, that was our initial
20 objective, was to have them meet all of the
21 criteria.

22 CHAIRMAN WELTY: So, we can reflect that
23 concept in the next revision and make sure that it's
clear.

1 DR. STOLINE: While we are talking about
2 this, can I just throw an idea out, because I'm not
3 sure that I know the answer to this at this point.
4 Suppose we agree on the criteria that will be used
5 in selecting the marker chemicals and suppose that
6 then we agree that we will use that criteria on
7 certain data sets and that all this will be con-
8 tained in an appendix to our report that will be
9 attached and so on, should we then go the additional
10 mile and say, here is the application of this
11 criteria to these data sets and these are the
12 chemicals that we suggest should be the marker
13 chemicals. It seems to me that that could be a
14 logical extension of our report and those that peer
15 review this actually have not only the criteria
16 but a worked example, and it's right there in front
17 of them.

18 DR. POHLAND: Well, I think we should
19 always go as far as we can and that is the point I
20 was making before. I think we are in agreement
21 with that. I think with the information we have
22 available to us, we should do as much as we can in
23 that direction and that is what I meant by not
leaving it open ended, let somebody else decide

based upon the criteria only.

1 DR. STOLINE: Okay.

2 DR. SIPES: So, a chemical that we suggest
3 in the appendix that may be there as of when this
4 document is completed, maybe another one would be
5 added or one may be deleted for reasons, but at
6 least we have come up with---and these chemicals
7 may not be complete but---

8 DR. STOLINE: This is what it looks like
9 today with the available data we have. I would
10 support that, going that far with this.

11 CHAIRMAN WELTY: All right.

12 DR. SIPES: I am still concerned with the
13 people looking a little bit aghast and I was wonder-
14 ing, the idea of why something that we would
15 consider, let's just use the benzene as an example,
16 that we want to measure benzene and we had that
17 listed before but then it comes back and raises the
18 question, if that is a ubiquitous chemical, then
19 you are going to pick it up in your comparative
20 area and in the EDA area and then statistically it
21 may reduce your sensitivity for showing a difference
22 between these two areas. Does that make sense?

23 DR. FOWLKES: You mean as you posed the

problem, it makes sense. Is that what you are---

1 DR. SIPES: Right, using the comparative
2 approach that we have followed, you know, looking
3 between a control or a comparative area versus the
4 EDA area and then we want the criteria to give us
5 our best chance of picking up the difference, if
6 it's due to a Love Canal chemical. See, that is
7 very important in the criteria that we set up and
8 I remember before Dr. Stolwijk listed a few
9 chemicals because they had been measured here, here,
10 and here and they would be good chemicals for
11 ambient air. Indeed they may be but they don't
12 fit into the objectives that we have in mind and
13 that is---I am just wondering if everyone realizes
14 that as to why---

15 DR. WINKELSTEIN: I don't quite understand
16 what you are saying. Take something, let's call
17 it chemical A, which is widely dispersed in the
18 environment. Chemical A was a specific chemical
19 dumped in the dump site and is detectable there at
20 some level. Is detectable in the EDA at a lesser
21 level than the dump site, wouldn't that still be an
22 indicator even if there is a likelihood that it
23 might be found in the control area?

1 DR. SIPES: Well, that is what I wanted
to generate, that type of discussion.

2 DR. WINKELSTEIN: Well, we would presume
3 then if it's a problem at a higher level in the EDA
4 than it is in the control area which hasn't yet
5 been designated or that it was an indicator, or
6 you may want to change it into one of the dioxin-
7 like substances in which you have some kind of a
8 determined level.

9 DR. SIPES: See, that is where it comes
10 in then, the risk aspect comes in when we follow
11 that third criteria that you had there and I don't
12 know how to bring that into this document.

13 DR. WINKELSTEIN: Well, that is a problem.
14 I mean---

15 DR. POHLAND: That is for the next group.

16 DR. WINKELSTEIN: You can't solve that
17 problem, I don't think.

18 DR. SIPES: See, that is why that issue
19 has been the approach that we took, the comparative
20 approach, it really has some constrictions on it,
21 upon the selection of the chemicals and how we want
22 to set it up. I just wanted to make that, and
23 you put it in a very good perspective when you

1 raised the issue of here, here and here, and then
2 came to the point, okay, we would have to go the
3 next step and we are not prepared to do that from a
4 risk assessment point of view at the moment.

5 DR. FOWLKES: I think what you are saying
6 is that it won't help us to discriminate. What we
7 could do is discriminate between an area uniquely
8 contaminated and a region ubiquitously contaminated,
9 I think that is really the issue.

10 DR. SIPES: That is how I saw the issue.
11 The discrimination aspect is relative to the Canal.

12 DR. FOWLKES: And if there is unique con-
13 tamination, that we can discriminate.

14 DR. MILLER: I think he is saying that if
15 there is unique contamination, then you have greater
16 confidence that migration is at issue than if it
17 is not unique contamination and that migration is
18 the name of the game, I think.

19 DR. SIPES: That is how I interpreted it.

20 DR. WINKELSTEIN: Well, you are going to
21 pick, if I understand the process, that there will
22 be more than one chemical picked anyway so that you
23 are not going to be depending on one indicator alone
anyhow.

DR. SIPES: No.

1
2 DR. WINKELSTEIN: You would have a group
3 of indicators and, of course, we understood and I
4 think we discussed the possibility that what we will
5 do with our control area is find out the control
6 area is just as bad as Love Canal or Love Canal is
7 just as good as the control area. It depends on
8 how the old business, how you look at something.

9 DR. POHLAND: We can't anticipate what we
10 might find at this point. We can discuss it
11 philosophically and knock it around.

12 DR. WINKELSTEIN: Well, we already discussed
13 the philosophical approach. The approach may be
14 faulty. The peer review may reject the approach.

15 DR. POHLAND: Well, as the same token, I
16 would hope that the peer review would come up with
17 a better approach.

18 DR. WIESNER: I think it's worthwhile going
19 around on this once more, Glenn, because---and
20 Dr. Miller and Dr. Fowlkes letter, they actually
21 focus on this point. I think it's in the first or
22 second paragraph where I think in a previous docu-
23 ment the toxicity was one of the criteria and now
it isn't, and I personally think that that is the

1 correct decision, that it shouldn't be because you
2 are looking for indicators of migration or displace-
3 ment, not indicators of risk, but I think once you
4 make that decision, as they pointed out very clear-
ly, you have set aside risk assessment.

5 DR. SIPES: Right. See, that word, Lew
6 raised that the last time at the meeting, the word
7 "toxicity," and that was before we decided on the
8 approach that we were going to follow as to some of
9 the criteria that could be set up and we have gone
10 the comparative approach so that that eliminates
11 that aspect.

12 CHAIRMAN WELTY: Pat and Martha, have your
13 concerns been addressed in reference to those items
14 plus item number five. You have a question?

15 DR. MILLER: Yes. One thing that I did
16 want to say which is kind of parenthetical, it
17 continues to be my understanding based on an early
18 assurance that was extended to me that there would
19 be a rather lengthy explanation of the assumptions
20 and factors that had shaped the influence or rather,
21 influenced the selection of these chemicals as
22 opposed to other chemicals and I don't know whether
23 these points one, two, three and four are meant to

be that but it seems---

1 DR. FOWLKES: That would be an appendix.

2 CHAIRMAN WELTY: No. That would be
3 included in appendix 8.

4 DR. MILLER: Okay and that will ---

5 CHAIRMAN WELTY: You will see that in the
6 next draft.

7 DR. FOWLKES: That would contain the
8 full rationale.

9 DR. WIESNER: Actually it's going to
10 include what Mike was talking about too, an actual
11 application of it.

12 DR. STOLINE: I hope it has everything in
13 there, the rationale and maybe not the data sets
14 because what you have shown me, I suppose those will
15 have to be made a separate appendix, the actual
16 data sets that were used in making this, but I don't
17 know that that needs to be specifically attached to
18 our report but then the application of those
19 criteria to these sets and then here is what these
20 chemicals are for each of these media. That is what
21 we subject to peer review.

22 DR. SIPES: Yes. I think what sometimes is
23 done for us, those chemicals fall out and now as we

1 narrow, a few more may fall out and we can show that
2 in the appendix, that indeed these were our criteria
3 in the document. We put it into practice here and
4 these are the chemicals that fall out under those
5 criteria and they can actually, as Paul said, they
6 can actually be listed. Is that what you have in
7 mind?

8 DR. STOLINE: Yes.

9 DR. FOWLKES: Mike, will you also be
10 specifying or addressing the question we raised
11 around the sampling protocol?

12 CHAIRMAN WELTY: We will probably get to
13 that a little later.

14 DR. MILLER: I think this is particularly
15 important because I mean, it's typical of the
16 Americans in general and scientists are no better
17 than the rest, frankly, that they have no connection
18 to history and if the purpose of these indicator
19 chemicals is to measure migration, I guess I want to
20 be clear from the start that that is what we are
21 doing so that we are not in a situation where some-
22 one three years down the road can say, well, yes,
23 we found that blump, you know, appears to have
migrated in rather high levels out of the Canal but

1 it doesn't have very serious implications for human
2 health. We don't have much, you know, and then
3 you start getting into the language of risk assess-
4 ment with respect to blump, chemical A.

5 So, I think it is very important that this
6 document contain that thinking, very clearly.

7 DR. SIPES: We came up with the opinion
8 that having a very detailed appendix as to why the
9 chemicals were selected and why some were eliminated
10 or why they were eliminated and then as Mike pointed
11 out, try to carry it through the application process
12 and justify a list as to where things stand at this
13 particular point in time.

14 DR. MILLER: Thank you.

15 CHAIRMAN WELTY: Are we ready to move on
16 to the next topic? Joe. Joe Slack, are you ready
17 to discuss the remediation?

18 MR. SLACK: Yes.

19 CHAIRMAN WELTY: Mr. Joe Slack is in charge
20 of remediation, works for the Department of Environ-
21 mental Conservation and the State of New York. So,
22 he will address item number two on your agenda and
23 give us an update on the remediation.

MR. SLACK: Excuse me just a second, Tom.

1 CHAIRMAN WELTY: Okay. We have Mr. Joe
Slack here to update us on the remediation.

2 MR. SLACK: The status of remediation work
3 at the Canal is summarized as follows: The first
4 task of the Superfund remedial program which was
5 the expansion and the improvement of the cap, the
6 cover over the site, is essentially complete. The
7 only work remaining on that now is housekeeping,
8 picking up, tidying up the site. The synthetic
9 membrane has been placed, it has been covered with
10 soil, topsoil, and it has been seeded and mulched.
11 That includes revisions to the drainage, the storm
12 water drainage of the Love Canal area.

13 Dr. Pohland requested an analysis on the
14 capacity of the storm sewers that remain in service
15 in the vicinity of the Love Canal site and that was
16 provided to him today.

17 The future remedial work includes removal
18 of contaminated sediments from the sewers, removal
19 of contaminated sediments from the creeks. Some of
20 the factors that affect that work are, an acceptable
21 disposal plan. As you are aware, there is consider-
22 able controversy on how this material should be
23 disposed and until the issue of disposal is resolved,

1 we do not even have approval from EPA to do any of
2 that work.

3 We intend, the DEC intends to clean the
4 sewers in 1985. We hope that the issue of disposal
5 can be resolved by then and that we can proceed with
6 the cleaning of the sewers in 1985. It's our
7 opinion that the sewers affect a much larger area
8 than do the creeks so that if we have to prioritize
9 the work, we would do the sewers before we do the
10 creeks and also the sewers are upstream of the creeks
11 and it only makes logical sense to clean from the
12 source downstream.

13 Another factor that has recently become
14 known that affects the schedule of remedial work
15 is the 93rd Street School itself. The 93rd Street
16 School was sampled and it was found to have con-
17 taminants in it including dioxin. There are low
18 levels of dioxin apparently discharging from the
19 93rd Street School into Bergholtz Creek. That
20 information has to be considered when designing a
21 remedial work program to remove contaminated sedi-
22 ments from the Bergholtz Creek. We think that the
23 work on removing contaminated sediments from the
creek should only be done if it's consistent with

1 what needs to be done for 93rd Street School and that
2 the creek clean-up would likely be delayed in order
3 to make that work consistent.

4 I will come back to that in a moment.

5 So, for right now, in 1985 we intend to
6 clean the sewers. Hopefully, there will be a
7 resolution on the problem of disposal. We do not
8 intend to work in the creeks.

9 In 1985 we intend to begin the perimeter
10 survey. The purpose of the perimeter survey was to
11 better define the extent of migration through ground
12 or over ground from the Canal site itself. I think
13 that is an important thing to be considered in
14 reviewing the data. We have also gone through all
15 the groundwater quality data and sort of catalogued
16 all the chemicals that we found, ever found, how
17 many times they have been found and we would be glad
18 to share that with you if it would be of assistance
19 in developing a list of indicator compounds and
20 by and large, the extent of contaminant migration,
21 our program has been modest, I would admit that, X
22 our groundwater monitoring program is modest but the
23 extent of chemical migration from the Canal as best
we can discern is not that widespread, not as

widespread as you might think.

1 We think that a perimeter survey program
2 would reflect groundwater samples and soil samples
3 in a rather intensive and vigorous manner starting
4 near the Canal and then working out away from the
5 Canal as necessary, we could probably define the
6 extent of at least through ground migration than
7 to some extent if stuff was carried overland by
8 runoff, we might be able to discern that by soil
9 samples. We intend to initiate that in 1985. We
10 hope to be able to modify that perimeter surveying
11 program which we have received approval from EPA
12 to start, to also perhaps select some of the samples
13 that this group or this effort might define as
14 being necessary to determine habitability. We might
15 be able to modify this program to include some of
16 that.

17 We also hope to be able to modify the
18 perimeter sampling program to at least reflect some
19 samples from the 93rd Street School to start the
20 preliminary investigations of the problem there.

21 The third thing that we hope the perimeter
22 sampling program will do and be consistent with is
23 the long term monitoring program. We expect to have

1 a report from our consultant E. C. Jordan in
2 December and that will be a draft final report and
3 it will be available for public comment. It will
4 map out the design of the long term monitoring
5 program for the Love Canal site and we hope that
6 perimeter sampling and the implementation of the
7 long term monitoring program can be done concurrent-
8 ly. They should be very much similar work effort
9 and they should actually be consistent with each
10 other and that is the schedule of work.

11 Coming back to the creeks, it appears to
12 us that work in the creeks should be consistent with
13 what needs to be done at the 93rd Street School and
14 given that we don't know much about the 93rd Street
15 School, the extent of the problem or what type of
16 problem it is, we will investigate whether we can
17 somehow temporarily stabilize the sediments in the
18 93rd Street---excuse me, in the Bergholtz Creek to
19 prevent those sediments, contaminated sediments
20 that are known to exist there from continuing to
21 migrate in the period of time it takes us to come
22 up with a full fledged remedial program that would
23 deal with the school, if necessary, the school and
the creek and that is the status of the remedial

work.

1 CHAIRMAN WELTY: There was one document
2 that was made available to us in Reston relating to
3 the results of your well monitoring in the EDA and
4 I noticed some of our consultants have had the
5 opportunity to look at that and I wondered if you
6 would be prepared to summarize that for us.

7 MR. SLACK: Okay. Steve Barlow works for
8 the Department of Environmental Conservation and is
9 responsible for our monitoring program. Steve, do
10 you want to stand up and perhaps you could summarize
11 the most recent sampling results.

12 MR. BARLOW: As far as the pesticides that
13 showed up, I did a comparison between the---in our
14 most recent sampling we put risers on forty of the
15 wells out in the field and we sampled all forty of
16 those wells.

17 CHAIRMAN WELTY: How deep are those wells?

18 MR. BARLOW: Well, they are the old EPA,
19 both overburden and bedrock wells. The overburden
20 would be ten to fifteen feet deep and the bedrock
21 wells are probably twenty, twenty-five feet deep.
22 So, you have got the two of them.

23 CHAIRMAN WELTY: So, it would be both

1 surface---would that be considered surface water,
2 the shallower wells or shallow groundwater?

3 MR. BARLOW: Yes. They are screened over
4 a wide interval so that it would be all the over-
5 burden combined. It is not any one particular soil
6 there. They aren't like some of the DEC wells
7 inside the fence that were screened at specific
8 intervals to try and detect the different layers,
9 what is going on there.

10 CHAIRMAN WELTY: And how many wells in
11 total were sampled in the EDA?

12 MR. BARLOW: Okay. There were forty of
13 them outside the fence that we had the results back
14 from.

15 CHAIRMAN WELTY: Okay.

16 MR. BARLOW: Most of them are fairly close
17 outside the fence. They don't go, say, beyond two
18 blocks outside the fence and I broke up the results
19 into different groups and compared them with the
20 EPA results from four years ago to see if there was
21 any change and if you look at just the volatiles,
22 space neutrals, acid extractables, they have all
23 either remained the same or have decreased. There
was only one positive result in that group for

1 methylene chloride and, well, actually there was
2 two of them but we didn't have a comparison with
3 EPA for that well, but the one that we did have a
4 comparison which was on the southwest corner, right
5 outside the fence, it showed up the methylene
6 chloride at 42 micrograms per liter and that was
7 the only parameter in that group that showed up
8 above detection limit.

9 In the metals group, I'm still not sure
10 what method the EPA used for their analysis, if they
11 used total or soluble metals, but all the metals
12 have increased since that time. The metals results
13 that we have back are for total. There are two
14 metals in particular which showed up high by drinking
15 water standards and I have nothing else really to
16 compare them with but there was lead and chromium
17 that showed up, lead at about 700 micrograms per
18 liter and chromium around 400 or 500 micrograms
19 per liter.

20 CHAIRMAN WELTY: Were those in all the
21 wells that the mean was elevated or just in certain
22 wells?

23 MR. BARLOW: No, most of the wells all
showed up higher than four years ago which was why

1 I say I don't know right now whether the EPA did
2 total soluble. They did solubles. If they did
3 solubles, then that would be explained.

4 CHAIRMAN WELTY: Steve.

5 MR. HOFFMAN: You did total metal?

6 MR. BARLOW: Yes.

7 MR. HOFFMAN: Unfiltered.

8 MR. BARLOW: Yes. I was expecting a call
9 back yesterday from the laboratory that did the
10 analysis but they haven't gotten in touch with me.

11 DR. POHLAND: The difference in analysis
12 between total and soluble can be significant.

13 MR. BARLOW: Exactly, and anywhere from
14 decreasing to increasing by a factor of ten. So,
15 most of them did increase.

16 DR. POHLAND: So, you did no filtration.

17 MR. BARLOW: No filtration, right, and in
18 fact, the method of sampling where we had like a foot
19 long piece of aluminum tubing with a cork on the
20 bottom and we just dropped this down into the well
21 so that would sort of stir things up and doing
22 the total metals, again, would, you know, you are
23 getting soil coming in so that would increase that.

The other group of pesticides which we

1 have results back on, in some cases they decreased
2 and in other cases they increased. I did sort of
3 map it out. Most of the ones that showed pesticides
4 were like within a block outside the fence. There
5 may be half as many wells outside the fence in
6 comparison with the EPA results four years ago that
7 had pesticides that were about half as many of them
8 and they did not appear to be getting closer to the
9 fence.

10 So, whether they are attributable to Love
11 Canal, I don't know because pesticides are so widely
12 used.

13 DR. SIPES: You made a comment about
14 methylene chloride being positive or 42 micrograms
15 or whatever it was.

16 MR. BARLOW: Right.

17 DR. SIPES: How did that compare to the
18 previous data, do you know that?

19 MR. BARLOW: I think it came out below
20 detection limit before.

21 DR. SIPES: So, when you say that was the
22 only positive, that that positive meant that that
23 was the only one above for that group, above the
detection limit.

1 MR. BARLOW: Right. Now, again, that is
2 on the wells, comparing where we have a comparison
3 with EPA results before. There was one other well
4 that had methylene chloride and that was the north-
5 east corner outside the fence that had about 70
6 micrograms per liter but of the 40 wells that I
7 sampled, those were the only two positive results
8 for that group of organics.

9 CHAIRMAN WELTY: Dr. Kim, did you have a
10 comment about methylene chloride?

11 DR. KIM: Did you go back to the laboratory
12 and verify the methylene chloride in those samples?
13 Did you go back to the laboratory and verify that
14 the methylene chloride was not, in fact, in those
15 two samples?

16 MR. BARLOW: No, I didn't.

17 CHAIRMAN WELTY: The question was, did you
18 go back to the laboratory and verify that methylene
19 chloride was not an artifact in those two samples?

20 MR. BARLOW: No, no, I didn't.

21 CHAIRMAN WELTY: Thank you. Is there a
22 problem with methylene chloride?

23 DR. KIM: It very frequently shows up as
laboratory artifact in the samples whenever you see

1 it in the water sampling and I think it may be wise
2 to go back and ask them to look and see if it's
3 laboratory introduced or actually present in the
4 environmental sample itself at the time it was taken.

5 MR. BARLOW: We did have a blank with that
6 set of samples which showed up clean.

7 DR. KIM: I think it would still be wise
8 to maybe go back and ask them.

9 CHAIRMAN WELTY: Dr. Stuart Black from EPA.

10 DR. BLACK: I'm not familiar with the
11 sampling part of the water program but I do know that
12 Cincinnati eliminated methylene chloride because it
13 was usually extracted from their analysis so they
14 didn't report any.

15 MR. BARLOW: This was in the EPA result.

16 DR. BLACK: Yes.

17 MR. BARLOW: Okay, because for that one,
18 they didn't report it, I put it down on the chart
19 as below detection limit because everything which
20 was reported, I assume they tested and was below
21 detection limit.

22 CHAIRMAN WELTY: Joe, have you had a chance
23 to interpret this data in terms of the remediation?
How would you interpret this in terms of the

effectiveness of the remediation, this particular study?

1
2 MR. SLACK: I would say that we interpreted
3 it only to this extent, if you look at the water
4 elevation data, not the chemical data, you can see
5 that there is in effect in the shallow groundwater
6 system caused by the drain, at least we assume it
7 is caused by the drain, and we have prepared a
8 number of reports that show that. Steve is working
9 on a summary of the monitoring data for the last
10 six months and we would be glad to share that with
11 you. As far as chemical trends, the first that we
12 have done is basically what Steve just described
13 where he tried to compare what we found in sampling
14 this year with what EPA found in 1980 and I wouldn't
15 plan to put a whole lot of confidence in that,
16 whether you would see anything or not, but the
17 elevation data would show an effect of the drain.

18 DR. POHLAND: That was a positive effect?

19 MR. SLACK: It shows the water table is
20 being drawn down by the drain, yes.

21 DR. POHLAND: I'm getting confused. What
22 is this Reston document. We haven't received it,
23 have we? You said some document was provided.

CHAIRMAN WELTY: Do we have copies of that
1 available?

2 MR. SLACK: I just have the one copy.
3 Copies can be made.

4 MR. HOFFMAN: This was the information that
5 CH₂M Hill put together. It's on the well data.
6 If you want, I could get you copies made this after-
7 noon.

8 DR. POHLAND: Well, my question goes
9 beyond that. I'm wondering what we are going to do
10 with this. Is this going to be part of our
11 consideration, part of what you look at and so forth,
12 and if so, is it going to be subject to the same
13 QA/QC rigor that the other data sets are going to X
14 be subjected to and then how is this going to be
15 put into any useful perspective with regard to what
16 we are trying to come to grips with; you know, I
17 think it's an important document if it's a meaningful
18 document and one that can be sustained under sci-
19 entific scrutiny with regard to the implications
20 of the remedial action to date or at least perhaps
21 it will provide a base line against which future
22 analysis can be compared. But, having heard all
23 this discussion and looked into all of the

1 experiences with regard to the vulnerability of data
2 sets, I would hope that these data are being col- X
3 lected so that they are valid data sets and would
4 thereby indicate a positive movement on the part of
5 the agencies toward accommodating some of our con-
6 cerns with regard to the real efficacy of that treat-
7 ment system.

8 CHAIRMAN WELTY: Steve Hoffman.

9 MR. HOFFMAN: Dr. Pohland, for your
10 information, the DEC water data which this is part
11 of that information, is on the QA/QC pilot study.

12 DR. POHLAND: It is. This document is
13 part of that.

14 MR. HOFFMAN: That data set would be
15 included in that because that is tied to the
16 remedial effectiveness evaluation issue.

17 DR. POHLAND: Okay.

18 DR. STOLINE: That was my understanding
19 too and I have a further question. You have more
20 up to date data apparently and my question to you,
21 Steve, is, is the data that is now being collected
22 from those wells, is this being---

23 MR. HOFFMAN: We are getting it all
together. It is available.

1 DR. STOLINE: It is being updated?

2 MR. HOFFMAN: Yes.

3 MR. BARLOW: Yes. They have all the most
4 recent sampling results.

5 DR. STOLINE: So that this data actually
6 will be used in our marker chemical identification
7 process.

8 CHAIRMAN WELTY: Yes.

9 MR. HOFFMAN: As it has been used, yes.

10 DR. POHLAND: The QA/QC scrutiny applies
11 not only to analytical protocols but sampling
12 protocols too.

13 MR. HOFFMAN: Yes, all four phases.

14 DR. POHLAND: And it will resolve whether
15 EPA used solubles versus---

16 MR. HOFFMAN: That is right.

17 CHAIRMAN WELTY: Anything else; any other
18 questions related to remediation?

19 DR. STOLINE: Just one question about those
20 well data. I know I have heard this before but
21 I can't remember. How often is data routinely
22 collected from those wells?

23 MR. BARLOW: At the moment we are sampling
the 24 wells within the fence every quarter. That

1 is more or less our interim monitoring program
2 until we get the final program from E. C. Jordan.
3 Now, this is as far as the sampling and we are
4 getting groundwater elevations once a month.

5 DR. STOLINE: And then there are forty
6 wells that are outside the fence?

7 MR. BARLOW: Right.

8 DR. STOLINE: That is starting from the
9 border of the EDA that borders on the Canal area
10 out to about two blocks away.

11 MR. BARLOW: Right.

12 DR. STOLINE: In all directions or in at
13 least three directions.

14 MR. BARLOW: Right, and we have sampled
15 results there for all those wells right now.
16 Initially our plan was just to sample them, see what
17 was there and if there were any problems, then to
18 do more sampling in that area.

19 DR. STOLINE: And E. C. Jordan is then
20 coming up with a plan that is going to be publicized
21 or whatever next month or whatever for those forty
22 wells outside the fence or in the EDA or the whole
23 thing?

MR. SLACK: The area that they studied

1 included the EDA. The area that they will recommend
2 for monitoring, I'm not certain whether it will
3 include the entire EDA and I assume to an extent
4 practicable, we will recommend use of existing
5 wells, although I'm not certain of that. We may
6 have to put in a number of new wells to get the
7 wells properly located for the monitoring program.

8 DR. POHLAND: This E. C. Jordan proposal,
9 will that be a reality very shortly? I mean, is
10 this---

11 MR. SLACK: Yes. The last conversations
12 we had with E. C. Jordan is that it's a final
13 report and a draft form will be available in
14 December.

15 DR. STOLINE: That raises another question.
16 As long as there will be ongoing monitoring data
17 by E. C. Jordan, shouldn't we be somehow be briefed
18 on the existence of that and somehow---I don't know
19 that may pertain to what we would recommend as far
20 as ongoing monitoring and so on but maybe not. I
21 don't know but---

22 MR. SLACK: Well, I think you raise a good
23 question. I think E. C. Jordan is also trying to
24 establish a list of analytes, compounds that might

1 be particularly useful in a monitoring program,
2 although the purposes to which our monitoring
3 program that they are designing would be compared
4 to what you are going to put your comparative data
5 to may be somewhat different, but it may be useful
6 if they were to be able to talk to you, Dr. Stoline.
7 I think perhaps if you would like to, we could
8 arrange that.

9 DR. POHLAND: Well, I would certainly like
10 to know what they have got in mind too because
11 implicit in what we are doing here is a follow-up
12 implementation stage and if indeed this long term
13 monitoring is going to be part of the agency's
14 response to the criteria, then I think it would be
15 certainly productive for us to be updated on how
16 this is going to come out, even if it isn't in its
17 final form.

18 MR. SLACK: That is really up to you and
19 to him, Dr. Huffaker. If you would like to arrange
20 that, I can arrange to have E. C. Jordan available
21 to brief these people if you would like that.

22 DR. POHLAND: Either that or if the report
23 is available for our scrutiny.

MR. SLACK: That is for sure. That is a

given.

1 CHAIRMAN WELTY: The report will be in
2 December, you say?

3 MR. SLACK: Yes. I don't know the precise
4 date but it should be available in December.

5 DR. STOLINE: And you say a draft cut of
6 this is now available?

7 MR. SLACK: No. I say that the thing that
8 will be available in December is a draft of the
9 final report that would be available for public
10 comment and also our review, and it will probably
11 involve some revision.

12 CHAIRMAN WELTY: Could you and Bob then
13 send that out to our consultants when it is avail-
14 able?

15 MR. SLACK: Sure.

16 CHAIRMAN WELTY: Would that be sufficient?

17 DR. POHLAND: Sure, because I don't see any
18 need to talk to E. C. Jordan unless for some reason
19 we find that we don't like their approach or some-
20 thing that runs in contradiction to what we are
21 trying to do, but I think your comment is interest-
22 ing, that they would be trying to come to grips with
23 maybe picking certain marker chemicals or whatever

1 you want to call them for their monitoring program,
2 maybe with even less availability of background
3 information and expertise than we have maybe sur-
4 rounding this table.

5 MR. HOFFMAN: We have had some discussions
6 with E. C. Jordan in the last couple of weeks.
7 They are looking towards this group to define
8 chemicals of concern and also to define how you
9 interpret those results in a remedial effectiveness
10 criteria.

11 DR. POHLAND: That is nice to know.

12 MR. HOFFMAN: That is why I raised my hand
13 high.

14 CHAIRMAN WELTY: Warren, do you still have
15 a question?

16 DR. WINKELSTEIN: Yes. I am still a little
17 bit confused. You say that you have got plans for
18 cleaning up the sewers or the drains in 1985 but
19 this is contingent on approval of a dump site. Now,
20 the question that I have is, has the remedial work
21 on the sewers held up previously because of a lack
22 of approval for a dump site or have you never had
23 the appropriations or whatever it is to clean up the
sewers? In other words, what really is the prospect

1 that that will be done in the next year and then as
2 I understand from what you said, there are no
3 specific plans for cleaning up the creeks until
4 after the sewers, which is certainly logical, have
5 been cleaned up, whatever that means. I think you
6 gave us a number at the previous meeting in terms
7 of tons or something like that but in reality, what
8 are the prospects of getting that approval? Where
9 do you stand?

10 MR. SLACK: Well, I will give you my
11 opinion and Bob Quinn perhaps, Bob Quinn is from
12 the U.S. EPA, Washington office, we met with Bob
13 to discuss this modifying our existing assistance
14 agreement to get funding to clean up the sewers and
15 creeks. We have not yet ever gotten approval,
16 funding approval to clean up the sewers and creeks.
17 I think that was one of your first questions.

18 DR. WINKELSTEIN: I thought you said you
19 had.

20 MR. SLACK: No, sir, we have not.

21 DR. WINKELSTEIN: So, that is all still in
22 the future sometime.

23 MR. SLACK: That is right. We believe
that that will be, first of all, we believe that
the decision or an acceptable method of disposal

1 will be established and that the funding then will
2 be made available to the State of New York to at
3 least clean the sewers in 1985.

4 DR. WINKELSTEIN: But I am a little con-
5 fused because it seems to me that this has been the
6 prospect for many years now, has it not?

7 MR. SLACK: I don't know that it has been
8 the prospect for many years.

9 DR. WINKELSTEIN: Well, several years. It
10 seems to me it keeps, you know---what---what's here
11 from the EPA. I gather this is the Superfund, is
12 that it?

13 MR. SLACK: Right. I think the report
14 prepared by Malcolm Pirnie which was an investiga-
15 tion of extended contamination in the sewers, was
16 1983, and that we are approximately a year behind
17 what we thought we would be able to do in the
18 creeks and sewers, at least a year behind in the
19 creeks and perhaps a year behind in the sewers, and
20 possibly even longer in the creeks now given the
21 fact that the 93rd Street School appears to be a
22 problem.

23 DR. WINKELSTEIN: So, if I were sitting
out there as a local resident, there is still no

assurance of a clean up. - I mean, it is just a hope.

1 MR. SLACK: I would have to say it's more
2 than a hope but it has not been done yet, that is
3 correct.

4 DR. WINKELSTEIN: Because everything we are
5 doing is contingent---none of this becomes in any
6 sense operative until both of those things have been
7 done. That is what it says in our fourth draft and
8 I assume it's going to say it in the sixth or the
9 tenth draft. That is the way we have been discuss-
10 ing throughout our meetings. That is our under-
11 standing. So, I would like to hear from somebody
12 else as well.

13 CHAIRMAN WELTY: We have Bob Quinn from
14 the remedial program at EPA headquarters. Bob, can
15 you address those concerns?

16 MR. QUINN: Just to explain in a little
17 detail where we stand, up to this point it was our
18 assumption that we would handle both the sewers and
19 the creeks simultaneously. Some of the factors
20 that have caused the delays in the past are the
21 obvious problem of disposal and the need to re-
22 evaluate some of the costs associated with those
23 alternatives that were rejected, as well as the need

for a qualitative risk assessment.

1 We are looking into the future, seeing that
2 a lot of these appear to be unsolvable within the
3 next few months and we are trying to get something
4 done as quickly as possible so we have recently
5 decided to divide up the two programs, i.e., the
6 sewers and creeks. So, what we are, as Joe alluded
7 to earlier, what we have decided to do is to proceed
8 with a record decision for the clean up of the
9 sewers. The schedule we are shooting for is a
10 signed record decision by the middle of February
11 and concurrent with that, the necessary funding.
12 We believe that if we do reach that date, that we
13 could have a design and initiate the clean up during
14 the construction year of 1985. Concurrent with that
15 would be the stabilization of the creeks and in that
16 way, deferring certain problems such as the large
17 amount of disposal of material within the creeks.

18 DR. WINKELSTEIN: Could you clarify what
19 is meant by the fact that the disposal procedures
20 have not yet been approved? I don't understand
21 what you meant by that statement about some kind of
22 decision in the middle of February.

23 MR. QUINN: In order to do any remedial

1 action under the Superfund program, it has to be
2 formally approved under a mechanism referred to as
3 a record and decision which is approved by Lee
4 Thomas, Assistant Administrator. In order to clean
5 the sewers, we are currently preparing in conjunc-
6 tion with Joe and his people that particular docu-
7 ment, the record and decision, which would clearly
8 explain what is to be done, what other alternatives
9 are available, why those alternatives were screened
10 out, it's for cost, for technical reasons or cost
11 effectiveness.

12 We are fully involving the public in this
13 process and this is a large reason why that decision
14 will not be made until, as we project, the middle of
15 February.

16 DR. WINKELSTEIN: But are you people agreed
17 that it is technically feasible now to do it and
18 you have a proposal of where you could dump the
19 stuff? I mean, are the scientific, technical
20 problems solved to your satisfaction so that your
21 record, decision of record will contain a proposal
22 that you think is satisfactory or are there still
23 problems to be solved? That is what I am trying to
get at.

1 MR. SLACK: I think that the question is,
2 of the alternatives available, which is the more
3 acceptable or most acceptable to the community but
4 there are certainly ways in which the sewers could
5 be cleaned and the sediments disposed of in
6 accordance with sound environmental practice.

7 DR. WINKELSTEIN: What, other than the
8 administrator or whoever it is who has to approve
9 your proposal, what blocks remain before that
10 proposal could be put forward? Has it not been
11 approved by the city or has it not been approved by
12 the people or not been approved by the state or
13 where are the present impediments to putting that
14 proposal in front of the person who has the authority
15 to sign and allocate the money?

16 MR. QUINN: I would hesitate to refer to
17 them as blocks or impediments. What we are trying
18 to do is to provide as much public input as possible.
19 We will have a full public comment on the draft
20 and that is what accounts for a large period of the
21 time between now and February.

22 DR. WINKELSTEIN: So, have those---one
23 more question and then I will stop: Have those
public meetings been scheduled?

MR. QUINN: Joe.

1
2 MR. SLACK: We have a definitive schedule.
3 We have already conducted the first one and the
4 next step in the program that we had planned for
5 involving the public in the decision on disposal is
6 a newsletter which is supposed to come out in, I
7 hope next week maybe. Is it next week, Anita?

8 MS. GABALSKI: By the end of next Friday
9 we will have it written and possibly distributed
10 within the next week.

11 MR. SLACK: And the newsletter, the purpose
12 of the newsletter is to describe the alternatives
13 that we are now considering. That is basically
14 it's a federal consultant but I use the word "we,"
15 we are considering for the disposal of the sediments
16 from the sewers and the creeks and I would say that
17 it is my understanding that the EPA will not
18 approve funding of remedial work until acceptable
19 means of disposal is established and acceptable
20 includes acceptable to the community.

21 DR. WINKELSTEIN: I understand but have
22 you technicians come to what you think is to offer
23 the public what you think is an acceptable way to
go?

1 MR. SLACK: I don't think that is what we
are supposed to be doing.

2 DR. WINKELSTEIN: Well, how does the public
3 know if the experts don't at least offer them some-
4 thing that they believe and do you have something
5 you believe will work?

6 MR. SLACK: What we are proposing to do is
7 to describe various alternatives, the pros and cons
8 that we, as best we understand them, and that is to
9 be a matter of public information. We will have
10 workshops where the public can come in and talk to
11 the consultants that have actually prepared this
12 report and discuss it with them. We are trying to
13 have public involvement in the actual decision and
14 not make the decision beforehand and then try to
15 sell it to the community.

16 DR. POHLAND: Is there a draft available
17 of what is going to appear as an agreement between
18 the state and the EPA?

19 MR. SLACK: For the clean up?

20 DR. POHLAND: Yes.

21 MR. SLACK: We have made application
22 several times for the funding for this and that is
23 a matter of public record. We have proposed to

1 determine how best to dispose of the stuff. That
2 is a part of the actual design, the specifying of
3 the work, and we were unsuccessful in getting EPA's
4 approval to go on that basis. They said the
5 disposal issue must be settled before we even fund
6 the work.

7 DR. POHLAND: Okay, but certainly if you
8 believe that in February of '85 that maybe a deci-
9 sion can be made, there must be some tangible docu-
10 ment that you are negotiating between the state and
11 EPA that must have something other than a bunch of
12 alternatives. You must have in your own minds some
13 preferred approach to solution to the problem. Is
14 that true or isn't it?

15 MR. SLACK: I could give you my own
16 personal opinion as to what would be done with the
17 contaminated sediments from the sewers. I'm not
18 certain that that would be the method of disposal
19 that is selected. The question is, is there a
20 technically viable, environmentally sound manner to
21 dispose of the sediments and I think the answer is
22 yes. I could tell you perhaps three. Which one
23 will actually end up being used, I'm not certain
yet. I can't tell you that right now.

1 DR. WINKELSTEIN: Does the EPA agree to
2 that? I mean, do you technicians have an agreement?
3 I understand the public has not yet heard it but the
4 public is going to be in a poor position to make any
5 judgment unless the technicians have come to some
6 kind of an agreement.

7 MR. SLACK: Well, I think there is a
8 fundamental difference in public participation and
9 decision making. It's our understanding that the
10 public would like to be involved in the decision and
11 that our responsibility is to describe the alterna-
12 tives and to explain the pros and cons. We would
13 be glad to give you our recommendations but the
14 decision is going to be a decision reached concu-
15 rently.

16 DR. POHLAND: But do you have a recommenda-
17 tion?

18 MR. SLACK: I personally, me, do not have
19 a recommendation.

20 DR. POHLAND: But how---

21 MR. SLACK: How would the recommendation be
22 made; as a result of the information that will be
23 put in the newsletter, the workshops that follow,
at least one more public meeting, a draft report

1 will be prepared by the consultant for the EPA and
2 that report will be made available for the public
3 to review and comment on. We will then have
4 another set of workshops for individuals to come
5 in and talk with consultants, either ask questions
6 or make suggestions and then a final report with a
7 recommended alternative will be presented.

8 DR. WINKELSTEIN: But today is November
9 the 14th and he is talking about putting this in
10 the hands of the administrator, some EPA administra-
11 tor on the 15th of February. There is no conceiv-
12 able way you could do all those things. It's like
13 this committee. How can you have two sets of public
14 hearings and reviews and technical reviews in two
15 months over the Christmas vacation?

16 MR. SLACK: Well, we have a schedule. I
17 can assure you. I think we can do it.

18 DR. WINKELSTEIN: Well, I am just asking
19 the questions. I better stop now.

20 MR. SLACK: I think your question is well
21 taken but I think if we want to clean the sewers in
22 1985, then we are going to have to move this along.
23 We can't allow this to drag on for months and months
and I think we have a responsibility to try to clean

1 the sewers and that means some of these questions
2 have to be resolved rather promptly.

3 DR. FOWLKES: I think Dr. Winkelstein is
4 suggesting that the groundwork should have been laid
5 well before this in order to meet the 1985 deadline.
6 The funding is one piece and the planning is another
7 piece of it and speaking for myself, I am astonished
8 to find that there is no technical plan or set of
9 recommendations drawn up that doesn't cost money.
10 That is not what the money for the remediation does
11 and I am frankly cynical enough to suspect that this
12 is a calculated impasse and that we are sitting here
13 saying, these criteria that we are working on really
14 are moot or don't apply and can't be applied until
15 this remediation work is in place and my suspicion
16 is that somebody, somewhere, is waiting for these
17 criteria to be applied to see the extent to which
18 the neighborhoods or neighborhood might be habitable
19 to decide whether it's worth cleaning up the creeks
20 and sewers and the creeks and sewers really relate
21 to the general welfare quite apart from these
22 individual homes, whether they are ever inhabited.
23 I find it very disturbing that this is 1984, almost
'85 and that recommendation was a long time ago.

1 DR. HUFFAKER: We have been reviewing
2 technical plans for cleaning the sewers for a year
3 maybe. Malcolm Pirnie presented some and these were
4 circulated amongst the agencies. So, I think Joe
5 was left with the understanding that all that was
6 going to be relevant between now and then is the
7 technical sewer cleaning procedures being defined
8 and there are several alternatives. Probably the
9 main decision would have to be reached, what are we
10 going to do with the stuff that comes out. There
11 were comments about how they might be cleaned,
12 whether they should use high pressure things or a
13 brush pulled through and quite a number of other
14 things. We commented on them as to whether or not
15 we were going to wash stuff back into the houses
16 and things of that nature but there was no choice
17 on what to do with the spoil that came out of it.

18 So, I don't think he has to do all of this
19 from scratch.

20 CHAIRMAN WELTY: Mr. Quinn.

21 MR. QUINN: Just to elaborate on that part
22 of it, I thought I had explained it earlier but
23 apparently not. We had Malcolm Pirnie, back in
1982, do this study and they came out with their

1 draft report in, was it December of '83, or '82,
2 rather. Well, January of '83 or '84, I beg your
3 pardon. The years fly by. That was January of '84.
4 We used that document to prepare a record of
5 decision to present to Lee Thomas for the cleaning
6 of the sewers and creeks. We had a meeting with
7 the full cast of characters with Lee Thomas to
8 present a record decision which we drafted in July
9 of this year. It was the decision of Mr. Thomas
10 that the study and therefore the record decision
11 as it stood was incomplete. It was incomplete in a
12 number of ways and those are the ways I explained
13 to you earlier. There was not enough definitive
14 explanation of the cost of the alternatives which
15 were ruled out. There was a recommended alternative
16 for the cleaning of both the sewers and the creeks.
17 Also it was decided that although not a full blown
18 quantitative risk assessment, a qualitative risk
19 assessment was needed and Phil has the task to
20 perform that and that is currently underway.

21 So, what is being done, with that Malcolm
22 Pirnie report we have a good deal of all of the
23 technical materials which are needed. All that is
needed during this interim period is a fine tuning

1 which is now being performed. So, we are not
2 starting from scratch. All this work is not to be
3 done in the next two or three months. It is just
4 simply a small degree of fine tuning.

5 DR. POHLAND: Well, if it's such a small
6 degree of fine tuning, then it would follow that
7 you would have a recommended solution.

8 MR. QUINN: We have a recommended solution
9 within that draft record of decision.

10 DR. POHLAND: Is that going to chage or
11 are you still---

12 MR. QUINN: As Joe explained, we would
13 like to present these alternatives to the public to
14 get their input as much as possible so that when we
15 do have the final decision, it is as much a
16 consensus as possible.

17 DR. POHLAND: Can you include us as the
18 public here assembled?

19 MR. QUINN: Of course.

20 DR. POHLAND: Well, my question still holds
21 then. Do you have a recommended solution for
22 cleaning the sewers?

23 MR. SLACK: Malcolm Pirnie recommended that
the materials be taken to a secure permitted land-

1 fill. Whether that alternative will be the elected
2 alternative, I don't know, but that is in the docu-
3 ment. That is a public document and I don't know
4 if you read it or not. There is at least one
5 recommended decision.

6 DR. POHLAND: I will assure you that in
7 some respects I have read more than I think I
8 really needed to read but I also read what they have
9 recommended and those have been in place for over
10 a year now, including the times that you had oppor-
11 tunities to review the draft reports and I too
12 wonder what appears to be the reluctance on the
13 part of the EPA and the agency to share with us
14 their priority notions with regard to what is going
15 to be done, because certainly it impacts on
16 credibility of how we proceed here with our final
17 criteria.

18 MR. SLACK: I'm sorry, I don't understand
19 any reluctance to share with you information.

20 DR. POHLAND: No. What I said was share
21 the decision. I'm hearing it's implicit in the
22 document because if it's just fine tuning, you are
23 not way back there trying to sort out alternatives
anymore. You must have some notion of what the

1 decision is going to be. Now, let me expand on that
2 too. I also had some problem, I can understand
3 why it might be prudent to separate the sewers from
4 the creeks. I have some problem with some of the
5 comments that you made that, well, when we determine
6 what is going to happen at 93rd Street, then we
7 will decide what is going to happen at the creeks.
8 Now, that sounds like you are backing up rather than
9 going forward.

10 Also, I am not sure what you mean by
11 stabilization to prevent migration. You know, that
12 is a whole new concept now that has been injected
13 into this whole process and I guess our group here
14 is trying to put our finger on just how real the
15 schedules are with regard to their relationship as
16 to what we are trying to accomplish and the
17 credibility of our activity is also hinged on what
18 we can extract out of your process and for that
19 matter, this was a very vivid issue that was brought
20 up back in 1981 with regard to the decisions that
21 were made at that time and we are assuring you
22 again that it will be a vivid issue with regard to
23 our decisions.

MR. SLACK: We understand that any decision

1 on habitability would be contingent upon the
2 remedial work in the creeks and sewers and we under-
3 stand that. I don't know if any more can be said. X
4 As far as work in the creeks, it appears now that
5 the 93rd Street School may be an active source of
6 contamination to the Bergholtz Creek. It would make
7 little sense to us to clean out Bergholtz Creek and
8 still have an active source of discharge. Therefore,
9 we recommend that more investigations, some sort of
10 feasibility study and investigation be done at the
11 93rd Street School site before work is done at the
12 creeks, at least the Bergholtz Creek. Now, if that
13 appears to be a step backwards, I'm sorry, but it
14 appears to me to be a prudent organization of the
15 work.

16 DR. POHLAND: Well, I think that we could
17 probably focus on all kinds of areas of vulnerability
18 around the Love Canal and the 93rd Street School
19 probably came up maybe because of a lot of local
20 concern about that particular circumstance, but if
21 you are going to throw that at me, then tell me what
22 you believe to be the pathway of transmission of
23 these materials that you say are getting into
Bergholtz and also tell me what your plan is to

alleviate that.

1 MR. SLACK: I have four sample results,
2 Dr. Pohland, one of which is a surface water runoff
3 which was analyzed, and I believe they found dioxin
4 in approximately, if my recollection is right,
5 7 parts per trillion. I know that there is an
6 active discharge. I don't know if it's occurring
7 through ground or not but at least there is an
8 overland flow and I would be hard pressed to des-
9 cribe how I am going to control that situation or
10 remediate it based on four analyses. That is why
11 I think it would be prudent to do more work at the
12 93rd Street School and to make sure that if anything
13 needs to be done, it is done before the creeks are
14 cleaned up.

15 DR. POHLAND: How are you approaching the
16 resolution of that problem? Are you looking for
17 another contractor to do another detailed study?

18 MR. SLACK: No. As I said earlier, the
19 perimeter survey which is a sampling program to
20 collect water and soil samples, we hope to be able
21 to modify that to include some field work at the
22 93rd Street School, so that that work could start
23 hopefully in 1985. Otherwise it would require

1 another amendment to our assistance agreement and
2 it would probably delay it further.

3 DR. STOLINE: Your number may be 7 parts
4 per trillion or 7 parts per billion.

5 MR. SLACK: No, 7 parts per trillion.

6 DR. STOLINE: In water.

7 MR. SLACK: That is correct. That is the
8 best of my recollection.

9 DR. STOLINE: But there were soil samples
10 taken out of the school and I remember those numbers
11 being two or three parts per billion for dioxin.
12 Those were the numbers that I recall.

13 MR. SLACK: Okay. I think he asked me to
14 characterize the effect that the 93rd Street School
15 might have on the creek and the way I am certain
16 that it may have an effect is that there is some
17 runoff from the site.

18 DR. WINKELSTEIN: If I had a private plant
19 over here and I had a lot of wastes and I wanted to
20 put them in an approved dump site and it just so
21 happened by coincidence that the amount of materials
22 I had is identical to what you estimate is in those
23 sewers, could you direct me to an approved dump site
where I could get rid of that stuff?

MR. SLACK: Yes.

1 DR. WINKELSTEIN: In the neighborhood here?

2 MR. SLACK: Yes.

3 DR. WINKELSTEIN: I just wanted to see
4 whether there was a place actually where---so, there
5 is a place where you could put this stuff?

6 MR. SLACK: Yes. I tried to say that. If
7 you asked me where there is a place of disposing in
8 an environmentally sound manner, I would say, yes.
9 I can tell you that now. Now, whether that is
10 going to be the one that becomes accepted and
11 utilized, I don't know.

12 DR. WINKELSTEIN: I understand that.

13 CHAIRMAN WELTY: Joe, will this draft of
14 the plan, the remedial plan for the creeks and
15 sewers be available for public review and comment
16 sometime in the next month or so?

17 MR. SLACK: I did not bring the schedule
18 that I had prepared in order to keep us moving
19 ahead on this. The plans and specifications for the
20 sewer clean up will have to be put together early
21 spring of next year in order for it to be available.
22 I think probably the greatest public concern will
23 focus on health and safety plans that are associated

1 with the work. The work is really rather simple
2 of cleaning sewers. I expect that we will have to
3 take some period of time where the people will want
4 to review the plans and details and there would be,
5 probably need to be revisions.

6 CHAIRMAN WELTY: When they will be avail-
7 able for the public, could you send those to the
8 consultants?

9 MR. SLACK: Certainly. The intent would
10 be, if the plans and specifications, including the
11 safety plan, were approved in the spring of '85,
12 we could bid that work and do it probably late
13 summer or fall of '85. That is the schedule we are
14 going to try to meet and that depends on a lot of
15 cooperation of a lot of people and hopefully we can
16 do that.

17 DR. WINKELSTEIN: Now, when this Mr.
18 Thomas or whoever it was disapproved the last
19 record of decision proposal, on this present sub-
20 mission you have met all of his objections presuma-
21 bly?

22 MR. SLACK: Bob, can you respond to that?

23 MR. QUINN: That is what we asked Hill to
take care of and the next version of the record of

1 decision which we will be presenting to him in
2 February is still being drafted. It is our hope
3 that that assumes, yes, they will all be resolved.

4 DR. WINKELSTEIN: So, that is CH₂M Hill.
5 So, what is the status of that?

6 MR. HOFFMAN: That is what Joe Described
7 as the meeting that is tentatively December 6th to
8 present the discussion of alternatives on the
9 disposal site.

10 DR. WINKELSTEIN: After that you are going
11 to have a public meeting, is that right?

12 MR. HOFFMAN: That is the public meeting.

13 DR. WINKELSTEIN: So, at the public meet-
14 ing you are going to present it.

15 MR. HOFFMAN: A range of alternatives that
16 have been described.

17 DR. WINKELSTEIN: A range of alternatives.

18 MR. HOFFMAN: The pros and cons associated
19 with it.

20 DR. POHLAND: And then there is a public
21 comment period of how long?

22 MR. HOFFMAN: Anita, do you have the
23 written schedule?

MR. SLACK: I have one prepared by

CH₂M Hill and we will make copies and give it to you
1 if you would like. This differs from the one that
2 I have but this would give you an idea. It's the
3 spring of '85.

4 DR. WINKELSTEIN: The spring of '85 for
5 what?

6 MR. SLACK: For a decision on the disposal.

7 DR. WINKELSTEIN: You mean, so, the record
8 of decision is not going to go to Mr. Thomas in
9 February, it's going to go in sometime after
10 February?

11 MR. SLACK: I can't answer for the dis-
12 crepancy. I'm sorry.

13 DR. WINKELSTEIN: All I am trying to do
14 is---this just confuses me. First I hear February
15 and now I hear late spring. I mean---

16 MR. QUINN: I have given you a schedule
17 that Joe, myself and a number of others agreed on
18 two weeks ago. I have not seen that schedule.

19 MR. SLACK: I will do this as best I can
20 from memory. We would hope to, by mid-February,
21 have a decision on the disposal of the contaminated
22 sediment. Now, there may be differences of opinion
23 on that but we need that decision sometime in

1 February or March, all right. We intend, the DEC
2 intends to go ahead and plan the remedial work. We
3 can do most of it, start drafting the specifications
4 for the cleaning, health and safety. We can start
5 work on that hopefully if the decision on disposal
6 is approved in mid-February, EPA will actually fund
7 the remedial work, the record of decision that must
8 be passed on by Lee Thomas, would be accepted by
9 Lee Thomas and we will receive funding to go ahead.
10 After the disposal issue is resolved, we can
11 complete, finalize the plans and specifications
12 for the work. That will actually have to describe
13 how the material is prepared for disposal and
14 perhaps where they will actually dispose of it.

15 We hope then in the spring and I can't
16 really be much more specific than that---

17 DR. POHLAND: Joe, let me interrupt you a
18 minute. Is the Canal being considered as a part of
19 the alternative for disposal?

20 MR. SLACK: Yes, it is.

21 MR. HOFFMAN: Joe, if I may comment here,
22 it's my understanding that the actual decision on
23 this disposal does not necessarily drive the sewer
cleaning because the interim storage concept is

being addressed.

1 MR. SLACK: I would say that I don't think
2 you could say that yet, Steve. I don't think it's
3 publicly accepted yet or anything like that. I
4 think that we are trying to get a decision on
5 disposal and that we will try to get public accep-
6 tance of that. I am not certain if we can. The
7 question is this: There is approximately, by
8 Malcolm Pirnie's estimate, 280 cubic yards of
9 contaminated sediment in the sewers. If that
10 material could be removed in drums, say, and
11 properly prepared for disposal at a secured land-
12 fill, well, then we would clean up the sewers. Now,
13 whether it's going to be disposed of at a secure
14 landfill has not been resolved yet but at least we
15 have cleaned up the sewers and if it were publicly
16 acceptable to allow those materials to be stored
17 until final decision on disposal was available,
18 then we will go ahead with the clean up of the sewers
19 even though a disposal decision had not been
20 reached. We would stage them and store them
21 temporarily. Otherwise this work may be delayed.
22 It may be delayed if this decision is not reached.
23 That is what Steve alluded to.

1 MR. HOFFMAN: Joe, it's not predeciding
2 that issue. It says that if that is acceptable,
3 then this is a mid-February date and that looks
4 like it is doable.

5 DR. WINKELSTEIN: Now, you could also say
6 to Mr. Thomas, if he is a reasonable man, suppose
7 that we decide to temporarily store this stuff in
8 drums at site A or B or whatever you want to call
9 it. Will you, Mr. Thomas, approve that in mid-
10 February, otherwise, you see, Mr. Thomas will not
11 approve it and in which case they don't have the
12 money, in which case they can't proceed.

13 Now, if I were involved in this situation,
14 I would have first gone to Mr. Thomas and said,
15 look, these are the alternatives I am going to
16 present to the public meeting on December 2nd. Are
17 any of these unacceptable to you because he has
18 already rejected the plan once.

19 MR. SLACK: No. I don't think that is fair
20 to say. He hasn't rejected the method of disposal.
21 I think what he said was there was insufficient
22 documentation to support the recommendation.

23 DR. WINKELSTEIN: Then he could say now
that I have the documentation, I am not prepared to

1 accept that. I mean, you need to proceed. The
2 people are going to ask you that question on
3 December 2nd. I mean, I should think they would.

4 MR. SLACK: Have you been talking with
5 Lee Thomas about that?

6 MR. QUINN: Yes. As a matter of fact, we
7 will be meeting with him in the next two weeks.

8 DR. WINKELSTEIN: So, you will be able to
9 answer that question when they ask you that.

10 MR. SLACK: The question being, sir?

11 DR. WINKELSTEIN: The question is, suppose
12 you decide on some alternative, you have given them
13 three alternatives, A, B and C and you want public
14 comment and a guy gets up and he says to you,
15 suppose we, the public, recommend alternate B.
16 Is that going to be satisfactory to the EPA or are
17 they going to grant you your decision of record and
18 give you the money? You say, "I don't know," and
19 they say, "Well, if that is the case, how about
20 alternative A? Suppose we approve alternative A,"
21 and if you say "I don't know," then they will say,
22 "Well, that leaves us only alternative C. Are they
23 going to accept that?" You say, "I don't know."
Then there is going to be a furor again and they

will say, this is the old run around again.

1 Now, somebody has to cut these things at
2 some point. That is all I am asking because if none
3 of the three alternatives that you propose to the
4 public are acceptable to the EPA, there is no use
5 having this December 2nd meeting. It's going to
6 lead to more public frustration. In other words,
7 these are kinds of things that Fred is asking you.

8 MR. SLACK: I think I understand your
9 question. As I understand the record of decision,
10 the record of decision isn't that Lee Thomas is
11 going to decide whether we have chosen the tech-
12 nically acceptable alternative or not. It is
13 whether we have documented that our chosen alterna-
14 tive is technically acceptable. I think that has
15 to be included in the record of decision. He is
16 looking to his staff people and those people in
17 turn look to the state to consider alternatives and
18 to document the process by which they elect the
19 selected alternative, and I think that is what he
20 found missing in the information presented him as
21 part of the record and decision.

22 DR. WINKELSTEIN: I hope you are right.

23 MR. SLACK: Bob, could you correct me on

that if I am incorrect?

1 MR. QUINN: That is correct.

2 DR. POHLAND: But the record of decision
3 also includes the preferred option and I would sure
4 like to know what that is if I could find out.

5 MR. SLACK: Do you want my personal
6 preference?

7 DR. POHLAND: No. I want to know what this
8 document is going to say. What is the preferred
9 option for clean up and disposal?

10 MR. SLACK: Is the document available?
11 Then how can we know what the document is going to
12 say?

13 DR. POHLAND: Well, how can you have this
14 meeting unless you can respond to that kind of thing?
15 Are you just going to throw the same alternatives
16 out that you have run by everybody before and---

17 MR. SLACK: I have run by them once before,
18 Fred, and the purpose of that meeting was to intro-
19 duce---

20 DR. POHLAND: Wait a second, Joe. When I
21 say "run by," the minute you made that Malcolm Pirnie
22 report public document, it was run by in perpetuity
23 and it's there and all those alternatives are

1 described there. There has been a critique of that
2 document and there has been an agency response to
3 the document. So, that is not just once and what
4 I can't understand is if you are going to have
5 another public meeting talking about the alternatives
6 and inevitably somebody is going to ask you, well,
7 what are you going to do or what do you recommend
8 to be done and that is what he is saying and I
9 guess that is what I have asked you to provide for
10 me for the last nine months. I'm trying to get a
11 grip on what you are---you see, what I want to be
12 able to do is say, okay, this is the one that the
13 agency or the EPA or collectively you feel is the
14 best approach to this situation. Now, I want to
15 be able to say, hey, that is sound engineering
16 judgment. That is all I want to be able to say.

16 MR. SLACK: You will have a report which
17 you can examine and hopefully concur that it is
18 sound engineering judgment. The report will be
19 publicly available and subject to public comment.

20 DR. WIESNER: Tom, I just have two comments
21 related to this. One is, Fred, I think you may be
22 putting people in a situation where they can do
23 nothing but lose. I think the people try to make

1 recommendations as far as remediation, are trying
2 to be as responsive as they can for having inadequate
3 time and consideration by the community prior to
4 making a final decision and in effect, you may be
5 asking them to, tell me what the final decision is,
6 and I think you have to be very sensitive to the
7 position that you are putting him into. That is one
8 point and I would be happy to have you respond to
9 it. I think both you and Warren have to be aware
10 of that and if you push in this direction to
11 what is your preferred option, you are at the same
12 time, from a scientific point of view, possibly
13 foreclosing some of the community's opportunity to
14 comment on this and you have to be very careful
15 and sensitive about that; just a suggestion.

16 The second point refers to a comment I
17 think you made two or three meetings ago and
18 several subsequent meetings and that is that you
19 don't want to manage every detail of this remedia-
20 tion program and I think that affects not only what
21 this committee's activities are doing here, as far
22 as this question is concerned, but a whole host of
23 other factors related to the implementation of
these criteria and you or any individual committee

1 is not going to be able to manage every step of the
2 operation and I think one has to be very careful
3 about assuming either the capability to do that or
4 the time and the wherewithal to cope with it. So,
5 those are two points.

6 Now, I may be misreading you but I sense a
7 very, very serious problem here as far as pushing
8 people to the point that you end up with foreclosing
9 the opportunity for the community to comment on it
10 and secondly, getting into the detailed management
11 in a way that you will never be able to come out
12 with criteria for habitability and help them with
13 moving the process on.

14 DR. POHLAND: Well, I accept your comments
15 and having been involved in really what we are
16 talking about is environmental impact assessment,
17 it's really the same process. We are looking at
18 projects being proposed and the various alternatives
19 including the various mediation efforts that can be
20 associated with the alternatives. So, therefore,
21 in the process of the decision making, and it
22 relates to us because our criteria are set up on
23 the presumption, I think, that certain things will
happen. What we are talking about now is the

1 credibility of what we are hearing with regard to
2 implementation of what we think is going to happen
3 and I would like to fortify that any way I can.
4 I find it rather disconcerting at this particular
5 point in time, recognize everything that has
6 preceded prior to this time, that this is not a
7 new issue that has been brought up. This has
8 certainly been an issue at the forefront of our
9 deliberation from the moment that I got involved
10 in this circumstance, maybe due to my insistence,
11 but certainly it has been. It's a matter of record
12 with regard to what was done before and what we
13 are wondering about now is that we would like to
14 see some more definite indication of the implementa-
15 tion of those expectations that we are making part
16 and parcel of our decision here.

16 MR. SLACK: I think perhaps something new
17 has happened, Fred. In July the DEC intended to
18 dispose of contaminated sediments on site, con-
19 taminated sediment that resulted from the cleaning
20 of sewers within the fence. That was a subject of
21 great public concern and actually new guides
22 documents from the EPA or a letter was sent to
23 EPA saying that if you are going to dispose of

1 contaminated material that result from your remedial
2 work, you must do so in a substantive requirement
3 with the RECRA, the Resource Conservation Recovery
4 Act and that is something new.

5 The remedial program, the recommended
6 program for cleaning the creeks and sewers and the
7 disposal of those materials, you are right, it is
8 in the Malcolm Pirnie report, but all of a sudden
9 the issue on disposal in this past summer became a
10 very important issue again and I think that is what
11 we are trying to deal with, is how to dispose of
12 these sediments. I don't think it is something
13 that was two years old.

14 DR. POHLAND: But you should have been
15 able to anticipate that anyway because any time
16 you pull up hazardous material and proceed to think
17 about storage, ultimate disposal, any issue
18 covered under RECRA, you would have to anticipate
19 that you may well be under that kind of regulation
20 and I frankly don't even care whether you just say
21 that if you would give me the assurances that
22 whatever is done will be done in accordance with
23 RECRA requirements, right now everything is rather
diffuse. I have difficulty establishing, for

1 instance, just how you are going to regulate the
2 existing remedial situation other than through a
3 permit with the city which is, in my opinion,
4 relatively loose and then it translates down the
5 line to their affluent discharge under AMPDS and
6 so forth and that is really a regulation of a treat-
7 ment plant over there and there probably are some
8 strong arguments for, hey, after all, you are
9 pulling out materials, hazardous materials, and
10 treating them on site, storing them on site, why
11 shouldn't you fall under RECRA under those circum-
12 stances? So, I can't believe that RECRA considera-
13 tions are new considerations. Indeed, you filled ←
14 out an interim permit for that site. So, that is
15 not a new issue.

16 MR. SLACK: It certainly is. The applica-
17 tion of RECRA standards for handling of waste
18 generated during the remediation on site is new. N2
19 It has only been stated since the end of July.

20 DR. POHLAND: Well, that aspect of it, but--

21 MR. SLACK: That is the issue.

22 DR. POHLAND: Well, it may be the primary
23 issue now but I would submit that all of these
scenarios that one can think about in terms of

1 remediation either fall under RECRA considerations
2 or CIRCRA considerations and I can't believe that
3 you can tell me now that now all of a sudden, just
4 because of the decision that was made possibly to
5 dump these materials or dispose of them on site
6 got you into RECRA. I can't believe that.

7 DR. WIESNER: Fred, what I was trying to
8 get to was that from the point of view of a group
9 of scientists that are focusing on habitability
10 criteria, it seems to me like in this area, you
11 have possibly three alternatives: One is you could
12 say, here are the specific guidance and expectations
13 that we expect to be carried through in the remedia-
14 tion and management of the treatment site and we
15 think that the apparatus can do it. They are going
16 to have to have oversight. That is one alternative,
17 all right.

18 The next alternative is, here is a set of
19 criteria and guidance and we are uncertain about
20 whether the apparatus can do it and you might have
21 to have some special incentives or special over-
22 sight for that to be carried out or the third
23 judgment that you could make is that no matter what
guidance and criteria you put in place, this just

1 doesn't seem like it is going to get done and,
2 therefore, habitability is moot.

3 Now, I mean, those are judgments that I
4 know you are grappling with but as individual
5 scientists you are going to have to cut on that
6 pretty soon.

7 DR. POHLAND: That is right and what I'm
8 trying to do is give our document the strongest
9 cuts and maybe the first one, and you know, I have
10 requested and received in defense of the department,
11 that I have received some of the information that I
12 have looked for with regard to a documented assurance
13 that certain things were being conducted in some
14 way and would be conducted that way in the future
15 and maybe improved and so forth, and I am going to,
16 at some appropriate time, propose that that become
17 part of our---whether it's in an appendix or however
18 it is done, I would like to get the same kind of
19 response, recorded response with regard to the
20 present situation, of expectations, proposed
21 approaches with regard to the remedial care.

22 Now, the problem that we are groping with
23 here is that we are simply given a set of alterna-
tives without any direction from the agency

1 inevitably responsible for implementing these
2 alternatives as to how they have come to grips with
3 these alternatives, when they are going to come to
4 grips with these alternatives and even if it is an
5 expectation, you know, I recognize all the problems
6 that you have to deal with in getting this program
7 off the ground but I think that I heard you say some
8 things today that I have been waiting for you to say
9 for some time and that is, in fact, that you do have
10 some kind of a schedule of implementation of things.
11 I think similar as with the sewers, we ought to
12 address the creeks a little more definitely with
13 regard to what is likely to occur. Maybe if this
14 cannot be tied down, then oversight is a better
15 alternative.

16 So, you know, I agree, you know, we have
17 these different levels but I would like the
18 strongest level, just like when Dr. Sipes wants to
19 stick in there some of the surrogates or marker
20 chemicals, that is an improvement over putting none,
21 and I want a similar and I will push for a similar
22 fortification on the issues of remediation.

23 CHAIRMAN WELTY: Is there anything specific-
ally that you would recommend that we change in the

next draft in relation to remediation?

1 DR. POHLAND: Well, I think it's, as I
2 mentioned with regard to the chemicals, I think we
3 should avoid leaving it open ended as much as we
4 can. The words are there. We are asking for things.
5 It is just like the first document said, that is
6 based upon the fact that the sewers are going to
7 be cleaned up. Well, basically, four or five years
8 later the sewers haven't been cleaned up and we are
9 not getting a clear picture of when they are going
10 to be cleared up and then the problem of final
11 disposal must certainly impact on how we deal with
12 the other issues of remediation.

13 For instance, if you do dispose on site,
14 I am not recommending this or presuming that this
15 is your choice, but if you do dispose on site, that
16 is an imposition on that whole site again,
17 particularly now unless you broke the integrity of
18 the liner to get it in underneath the liner, you
19 have a different scenario to deal with. Certainly
20 you would come under RECRA under those circumstances.
21 I don't see how you could avoid it because you have
22 taken stuff from one site, declared hazardous,
23 and put it in another site which is either a

1 storage or ultimate disposal site and that is a
2 RECRA stipulation.

3 So, you know, it's nice to speculate on
4 all the scenarios around but certainly if this fine
5 tuning is where we are, we ought to have a better
6 notion of what is likely to occur within the fore-
7 seeable future.

8 MR. SLACK: If the disposal were at a
9 RECRA permitted facility, you could probably make
10 some decision on habitability, correct?

11 DR. POHLAND: With regard to the ultimate
12 disposal of sediment. We could eliminate that
13 basically as a concern.

14 MR. SLACK: If the sediments were disposed
15 of on site, they would also have to be in compliance
16 with the substantive, technical requirements of
17 RECRA. Would that allow you to make a decision on
18 habitability?

19 DR. POHLAND: Sure.

20 MR. SLACK: Then I think that is the way
21 you should approach the problem.

22 DR. POHLAND: But then, see, I asked for a
23 better indication of the management of the treatment
site and I got most of what I wanted. I wanted an

1 assurance also that there is going to be a routine
2 recording of information and its use in management
3 of the site and those words are in our criteria
4 document right now. They would be so much more
5 palatable if we could append to them maybe an
6 appendix with a statement from the agency, in fact,
7 fortifying the intent.

8 MR. SLACK: I don't see any problem with
9 that. I think we have done that in May. We have
10 done it again in June and our applications for
11 funding from the EPA included schedules. I would
12 be glad to get that information and consolidate it.

13 CHAIRMAN WELTY: Can you help us with
14 preparing the appendix relating to this specific--

15 MR. SLACK: Yes. I will give you---I have
16 schedules. I will give you the schedules and you
17 can see the schedules. They have changed somewhat
18 since early spring of this year but they are still
19 trying to do the same work.

20 DR. POHLAND: Joe, what I would suggest,
21 you have the issues of remediation spelled out in
22 general in the criteria document. Just look at what
23 we are saying there and respond accordingly with
regard to the present position of the agency. I

1 don't want to force him in a box or anything. I
2 just want you to say, hey, here is where we are and
3 here is where we think we are going with this and
4 these are the controls that are going to be working
5 throughout this process.

6 CHAIRMAN WELTY: Can we move on to the
7 dioxin sampling protocol?

8 DR. FOWLKES: I would just like to add a
9 very general statement. I think that Fred's concern
10 and the concern of everyone here is that the
11 integrity and credibility of the work of this
12 committee is not autonomous. It doesn't stand on
13 its own. It's interdependent with the integrity of
14 the coordination and the communications that
15 organize work overall and I think these questions
16 have come up before around the treatment site,
17 around the problems of information and around the
18 communication and we are raising them again, and I
19 want to raise it with reference to, somebody out
20 EPA, this was in the newspaper this morning, talking
21 about the job of this committee, defining our work
22 as work which will define the neighborhood as
23 habitable and I feel undermined. I feel professional
ly insulted and that somehow I thought we were a

1 collection of interdependent professionals and
2 agencies, planning around a common goal with a
3 common set of principles and that we had sat here as
4 a committee, understood and articulated the need
5 not to build into this a bias toward habitability
6 but rather, a set of criteria with which to evaluate
7 the potential for habitability and someone from an
8 agency who has representatives on this committee
9 is describing our work in precisely the opposite
10 terms from which we have understood it, and goes
11 on then to express his impatience with the time
12 delays and how the imperfections of science ought
13 not to interfere at all with this kind of delibera-
14 tion. It is times like these when I read something
15 like this, I feel as though we should go home and
16 that our work is really wasted because somebody from
17 a cooperating agency makes a statement like that
18 and I think it's part and parcel of the same problem,
19 whether or not there is technical efficacy around
20 the remediation to the sewers, whether or not some-
21 body from the EPA is going to sustain the integrity
22 of this work.

22 CHAIRMAN WELTY: Vince Pitruzzello from
23 the EPA.

1 MR. PITRUZZELLO: Yes. I would just like
to respond to that.

2 CHAIRMAN WELTY: Why don't you come up here.

3 MR. PITRUZZELLO: I just have a quick
4 response. The regional administrator, Chris Daggett,
5 made that comment.

6 DR. FOWLKES: That is the person.

7 MR. PITRUZZELLO: Chris Daggett. He is
8 the new administrator. He was fully aware as of
9 a couple of days ago of the process. He is fully
10 aware that the process is to determine whether the
11 area is or is not habitable, suitable for habita-
12 tion. I really don't understand the context of
13 that quote. I wasn't there when the quote was made.

14 DR. FOWLKES: It's very damaging to the
15 work of a committee like this.

16 DR. DAVIS: Could you read it?

17 MR. PITRUZZELLO: Chris is very well aware
18 of the study.

19 DR. FOWLKES: It doesn't make me feel any
20 better, after almost a year of extremely hard work.
21 "What we really have to do with the government study
22 of Love Canal habitability is reassure these people
23 these buildings are habitable."

That is number one.

1 DR. DAVIS: Who is being quoted?

2 DR. FOWLKES: This is Daggett. "Daggett
3 opposes continued delays because of scientific
4 imperfections."

5 I have never served on a more hard working
6 and conscientious committee than this one has been
7 and I think if we can't depend on the agency
8 officials of the agencies that are cooperating in
9 bringing us all together, then we have some real
10 problems.

11 MR. PITRUZZELLO: As I said, not being
12 there, I can only assure you that the regional
13 administrator knows that the process here is not
14 predetermined. It is to determine whether the area
15 can or cannot become habitable.

16 DR. FOWLKES: Well, I'm glad he knows this
17 but it doesn't show in a comment like that and the
18 damage is done. It's not what he knows, it's what
19 he does. I don't want to make an issue of this
20 but I really want for myself, anyway, as a member
21 of this committee, to go on record with respect to
22 feeling that the integrity of my own professionalism
23 is compromised and that his professionalism has

1 been responsible respecting the work of this.
2 committee. So, that is all.

3 MR. PITRUZZELLO: I can just give you my
4 knowledge of what happened and unfortunately I
5 wasn't there, but Chris is fully aware of the inten-
6 tions of this committee.

7 DR. VANDERMEER: Is there any assurance,
8 Dr. Fowlkes, that could be given to you by the
9 regional administrator that would---

10 DR. FOWLKES: It's not me. I think the
11 regional administrator ought to be making a state-
12 ment to the people of Love Canal and to the community
13 of Niagara Falls and the paper. I mean, he either
14 knows how to do his job or he doesn't. That is
15 really what I am saying and I think that is the
16 issue around the remediation too. People are there
17 and we can trust them to do their job, or they are
18 not, and the issues of communication have come up
19 before and the interdependence and integrity of the
20 work of this committee with the integrity and work
21 of others, and I don't think it's me that needs the
22 reassurance, I think it's the committee and the
23 larger community.

 DR. VANDERMEER: My experience has been

1 that statements can be taken out of context and can
2 be extraordinarily damaging and I am not sure
3 whether this was or was not but I do have the
4 assurance of Mr. Pitruzzello, who is a member of
5 the TRC, that in his briefing of the regional
6 administrator, that it was never implied or intended
7 to come across that the decision on habitability
8 had already been made and this committee had been
9 pulled together to solidify that decision and to
10 work quickly toward that end and I share with you
11 all of your concerns. I am wondering if you have
12 any recommendations that we could follow up on
13 immediately to deal with not only your concerns
14 but mine?

14 DR. FOWLKES: Not any that I could suggest
15 in public.

16 DR. MILLER: I think there could be a cor-
17 rection in the paper. I imagine they would accept
18 that even on behalf of the reporter who pulled it
19 out of context or on behalf of---or on the part of
20 the gentleman who was quoted.

21 DR. WIESNER: I think we have got a couple
22 of people from CDC who are working hard on this
23 committee with you and we are very, very impressed

1 with the effort of this committee and I think we
2 would be very interested in stating clearly that if
3 that quote is accurate, it's either a mistake or it
4 is something very serious that we disagree with
5 because we sat out long hours specifically design-
6 ing a process that is going to be open and complete
7 with the community and the scientists involved and
8 they were going to define the steps from the
9 beginning to the end to answer the question of
10 whether, not how, you know, whether habitability
11 was going to occur.

12 . . . So, I have got a person on my staff,
13 Tom Welty, sitting there cheering this and for the
14 record, I would want to make that very clear
15 because we really did and I think this committee has
16 been marvelous in the cooperation with the open
17 discussion of this and it is something that we would
18 not want to be associated with and I think something
19 has to be done from our point of view also.

20 DR. DAVIS: Let me raise a related issue
21 and I think this has to go into the document on
22 habitability as well. The recent disclosure that
23 the CECOS facility may not be a contained facility,
that it may be leaking, and this is the permitted

1 class 1 facility which had previously been desig-
2 nated to receive the dioxin overpacked waste or
3 the dioxin waste in whatever form, and now it is
4 going to be more closely monitored. That really
5 raises an issue that is beyond the purview of this
6 committee but needs to be stated, I think, in the
7 beginning of the document as well and that is that
8 the entire effort to clean up Love Canal and to
9 assess habitability presupposes that there are
10 safe disposal practices available. Otherwise, one
11 is simply moving waste from one place to another
12 and all you are doing is spending money and perhaps
13 getting a little time, and I think that it is
14 important that we state that we cannot determine the
15 adequacy of the entire RECRA related effort that is
16 going on now in this country and around the world,
17 but that it is extremely important that every effort
18 be made to see that wastes removed are properly
19 secured. Otherwise, we are simply moving pollution
20 rather than solving it, and while some people have
21 suggested that the solution to pollution is dilution,
22 that is really not true.

23 DR. FOWLKES: So, there are really two
kinds of integrity in issue, the integrity of

linings and the integrity of people.

1 MR. PITRUZZELLO: He was just pointing out
2 that Jim Martin made the statement, not Daggett,
3 but it is still coming from the EPA, but I just
4 want to reassure you once again that the administra-
5 tor does know what we are doing here.

6 DR. MILLER: But there must be a public
7 relations officer. There are people here from the
8 media. I mean, there has to be a way to fix this.

9 REV. DYER: There are three people sitting
10 in this room that heard that yesterday.

11 MS. HALE: Are we allowed to comment,
12 because I would like to comment on that issue. I
13 read that in the paper this morning. I was at that
14 meeting and there was a lot of debate by Sam
15 Giarrizzo and other people that alleged there was
16 a difference on 103rd Street, to the fact that they
17 do want to stay in the area and it was my understand-
18 ing when I read that article that his reference was
19 to people who would like to stay there, whether or
20 not their buildings were habitable. I didn't feel
21 that the comment was made in reference to all the
22 buildings in the Love Canal, but now I would like
23 to know, I would like to clarify that statement.

1 DR. FOWLKES: To me, it almost doesn't
2 matter because that isn't the point, that we would
3 like to be able to reassure people. We would like
4 to be able to set up criteria with which to evaluate
5 in fact whether those homes are habitable.

6 MS. HALE: I mean, I think he should
7 clarify the statement and say exactly what he did
8 mean by that but it was Mr. Daggett. It wasn't the
9 man with him.

10 MS. GABALSKI: I was at that meeting and
11 a lot of what did take place was centered around
12 the discussion of what fear does in a situation
13 like this and the role that fear plays and Chris
14 Daggett and Marshall both had strong feelings that
15 communication was essential, and if the thing is
16 habitable, if it is deemed to be habitable, then
17 it's our responsibility to communicate with the
18 people so that they believe that statement and,
19 you know, that was a lot of what the discussion was.

20 DR. FOWLKES: That is a lot of what this
21 committee has tried to do and it came across in
22 the paper, it was as though this particular group
23 was somehow inadequate or had been deficient in
addressing precisely that issue. That concern is

1 what has framed, I would say, in major ways the
2 work of this group and as it came out there, it was
3 somehow as though he was the champion of that point
4 of view as opposed to this group of people and
5 that simply isn't true.

6 CHAIRMAN WELTY: Vince, could you possibly
7 get the appropriate people from your staff to write
8 a letter to the editor to clarify this whole issue?

9 MR. PITRUZZELLO: Oh, yes, sure.

10 DR. WINKELSTEIN: Well, can I offer a
11 suggestion? My experience with this is that we will
12 waste our energies in this activity. We have repre-
13 sentatives of the press here. Let them correct it.
14 They are listening to what we are deliberating on
15 and if we get involved in this side issue, but I
16 do think that we have to make crystal clear something
17 that is right here and I am sure it is not going to
18 get out of the fifth, sixth, or tenth revision of
19 this document and that is, page 3 it is stated in
20 crystal clear terms that everything that this
21 committee is doing, depends upon the completion
22 of the remedial activities. That is not to take
23 place for three years, the criteria, and you know,
as I listen to the discussion and the experiences I

1 have had with this kind of thing is that we are
2 talking about at least three years before, at
3 best, before these remedial actions take place.
4 I think everyone, we ought to be fully aware of
5 that ourselves.

6 It says here it is expected that the fol-
7 lowing provisions be met before these criteria are
8 used and then those provisions are spelled out
9 under section A and section B and there is no way
10 that, given the present state of the affairs, and
11 everybody ought to be clear on that, including
12 ourselves, I mean there is no use hiding anything.
13 At the minimum we have heard two years, one year
14 for the sewers and hopefully one year for the creeks
15 because in this neighborhood you can't work on those
16 things except in what you call your construction
17 period which is the summer months. So, that means
18 two years away and knowing the way government
19 agencies act, especially when you are at two levels,
20 that probably means an optimistic period is three
21 years and I hope everybody understands that.

22 That was my understanding. Now, am I
23 misunderstanding? Fred, am I misunderstanding that?

DR. POHLAND: No.

1 DR. WINKELSTEIN: So, everybody better be
2 clear on that. It is right here. It says that,
3 be met before these criteria are used. If we are
4 not in agreement upon that, we better get that on
5 the table right now.

6 DR. DAVIS: I do have another modification
7 to make to this document, to suggest which might
8 make it take less time but I haven't really thought
9 of the time frame and I don't know whether I should
10 mention it at this point. I don't know, Bob,
11 whether you mentioned my comments.

12 MR. HOFFMAN: I mentioned it.

13 DR. DAVIS: But it seems to me, if I may
14 take a moment, we are treating TCDD differently
15 from the other chemicals and I was impressed with
16 Dr. Silbergeld's letter, although I am sorry that
17 he has not been able to ever be with us, that where
18 there are existing federal standards for pollutants
19 such as ambient air or water standards, where these
20 have already been developed and you all know
21 criteria documents and years go into developing
22 these standards, that the levels of pollutants in
23 the air and water of the Love Canal area should not
exceed these standards plus or minus the standard

error of detection.

1 Now, what that would mean, I think, Bob,
2 you and others may tell us it doesn't mean a lot
3 if you put that in but because the levels detected
4 have not been anywhere near those standards and
5 also because the standards for air pollutants,
6 there are only four toxic air pollutants for which
7 there are standards, ambient standards right now,
8 beryllium, vinyl chloride and two others, does any-
9 one here know them?

10 UNIDENTIFIED VOICE: But those are
11 emission standards, not really ambient standards.

12 DR. DAVIS: So, there are very few.

13 UNIDENTIFIED VOICE: None, no toxic ambient
14 air.

15 DR. DAVIS: Well, asbestos, there is a
16 standard for asbestos that is visible dust, not
17 much of a standard, but there is one, an ambient
18 standard, but in any case, let's understand that
19 even if you put that phrase in, it doesn't bias a
20 whole lot but it would seem to me that if there were
21 a case where there was an exceedence of an existing
22 federal standard, then there wouldn't be any ques-
23 tion that you wouldn't have to go to do all this

1 expensive sampling in a comparison area. Unfortunately,
2 ly, I doubt that that is the case and can anyone
3 here address that issue?

4 MR. PITRUZZELLO: I would be certain, as I
5 said before, there is no ambient air standard aside
6 from the typical sulfur oxides, nitrogen oxides.
7 That is the air. There is no indoor air standard.

8 There are no soil standards, and the only
9 thing is the drinking water standard.

10 DR. DAVIS: Yes. You do have water stan-
11 dards.

12 MR. PITRUZZELLO: Drinking water standards.

13 CHAIRMAN WELTY: That is not for ground-
14 water, however.

15 DR. DAVIS: It is not for groundwater.
16 However, and I am sorry, again, as some of you may
17 know, I was not able to be here religiously last
18 time, I have not been able to give this the atten-
19 tion that I would like because my father recently
20 died, but I am here now to state at this time that
21 I think that it might therefore be worthwhile to
22 at least consider the possibility for toxic pollu-
23 tants for which OSHA standards exist, such as
benzene, and exposure should not exceed the TLV

1 divided by a safety factor of six plus or minus
2 the standard error of detection and I would be glad
3 to go into a rationale for that but what I am trying
4 to suggest is that, and this is prompted by Warren's
5 comment, if we are really talking about three years,
6 after all the time that has gone on, perhaps we
7 could include in the document in addition to the
8 comparison approach, because it may be that ultimate-
9 ly that is the only way to do it, some provision
10 such as I understand was discussed at the last
11 meeting but not generally accepted, to also include
12 a consideration of existing federal standards,
13 whether they be air or water or OSHA standards so
14 that we might save some time.

15 Now, in fact, if I remember the monitoring
16 data correctly, probably these won't help a great
17 deal because except for the very first monitoring
18 that was done in the first homes, the levels have
19 not been that high that we have got recordings on.
20 On the other hand, instrumentation and techniques
21 have changed somewhat since 1978 when those measure-
22 ments were done, but I just would throw it out as a
23 suggestion. If we are talking about three years,
then quite frankly, once you say three you might as

1 well say five, although financial decisions can
2 start to be made which I gather is a big concern
3 for many people who have a lot of investment, the
4 actual decisions are---

5 DR. WINKELSTEIN: But I think that I will
6 speak only for myself, my understanding and I think
7 it has been said over and over but it has to be
8 reiterated, is that the criteria for habitability
9 make no sense until the agreed upon remedial work
10 is completed. You cannot convince me as a member
11 of this committee, I'm not going to put my name to
12 an approval of any committee report unless you can
13 convince me that it is not prefaced by that require-
14 ment. I mean, what is the use of talking about
15 habitability if there are 200,000 cubic feet of
16 contaminated sediment in the sewers of the neighbor-
17 hood? I mean, it's ridiculous. And the streams,
18 I mean, we have heard the public here every single
19 time and if the streams remain contaminated with
20 dioxin and people are concerned about it, I mean,
21 is there something wrong with me? Am I not hearing
22 correctly? And that is my feeling. So, I am not
23 prepared to waive that, Devra, I just couldn't waive
that personally and that is why you are putting so

1 much pressure on Joe because we want to get a clear
2 picture and I'm just saying that we have been dis-
3 cussing this for an hour and actually we don't need
4 to discuss it any further.

5 DR. DAVIS: I don't disagree with you at
6 all. I understand that and I am sorry if I was,
7 by implication, if I was. I understand your point
8 and it is very well taken.

9 MR. SLACK: I don't mean to take issue with
10 that. I just want to make sure I understand and I
11 would ask you to consider something when you make
12 those statements. If I could use the blackboard
13 again.

14 First of all, I understood the decision on
15 habitability wasn't necessarily going to be on an
16 all or nothing basis for the EDA, that is, that
17 certain parts of the EDA might be found habitable
18 while others might be found to be uninhabitable.

19 DR. FOWLKES: That is within the general
20 framework of accomplishing the remediation.
21 Nothing is habitable. I think that is what Warren
22 is saying, that the potential for habitability is
23 nonexistent in the minds of, I think, this group
until this remediation is done.

1 MR. SLACK: That is what I am trying to
2 clarify. I know what it says and what I'm trying
3 to do is clarify in my own mind what you mean by
4 that and also ask you to consider something.

5 These are the creeks, Bergholtz Creek and
6 Black Creek. They lie to the north of the EDA.
7 The sewers are distributed throughout. There is
8 no doubt that if the sewers are a problem, that
9 affects practically the entire EDA. That is pretty
10 well established but it would seem to me that if
11 the issue is the creeks, I would ask you to consider
12 if areas, all the areas within the EDA are affected
13 by the creeks which lie to the north of the site.

14 Now, the Canal is still going to be here
15 and the way you set up your neighborhoods, if you
16 would give consideration to this, I will just use
17 an example, if that were the EDA and all the neigh-
18 borhoods were to touch on Love Canal, then it's
19 possible in every single one of those neighborhoods
20 there would be a point that would exceed your
21 criteria for habitability no matter how you set them
22 up and if you decide on the neighborhood all or
23 nothing, none of the neighborhoods would be found
to be habitable by that logic.

1 On the other hand, if this is the Canal,
2 now all the hot spots end up in one neighborhood
3 which is uninhabitable but the other ones might be
4 found to be habitable. That is just the manner in
5 which you select your boundaries. It's also true
6 that one of the neighborhoods around the creeks, it
7 might be that you would find that neighborhood to
8 be uninhabitable but other areas within the EDA
9 not affected by that---

10 DR. MILLER: But there are people on the
11 other side of that creek that are living there now.

12 MR. SLACK: That is what I am asking you
13 to consider, that that may be true, that this area
14 may not be---may not meet your criteria for habit-
15 ability. The only thing I'm asking---

16 DR. FOWLKES: No, no, no. The EDA doesn't
17 meet the most fundamental criteria for habitability
18 unless the remediation is done. I think that is
19 what we are saying.

20 DR. WINKELSTEIN: Even if I wasn't a member
21 of the committee I can read. That is what it says
22 on pages 3 and 4. I don't have to be a member of
23 the committee.

 MR. SLACK: Don't misunderstand me. I

1 understand what you are saying. I'm asking you
2 to consider something different. The consideration
3 I am asking you to give is if the creeks cannot be
4 cleaned up for two or three years, you are probably
5 right in that, Dr. Winkelstein, then is it possible
6 that that area may not be habitable. Does that
7 affect the entire EDA? That is a decision that you
8 will have to make. Maybe---

9 DR. FOWLKES: We made it. You know,
10 the EPA made it in 1980 with its report. The area
11 was habitable on the condition that it be made
12 habitable. That is what it said.

13 MR. SLACK: I believe that decision was on
14 an all or nothing in the EDA.

15 DR. FOWLKES: That is right but we are
16 saying, first of all, in the precondition for
17 considering habitability of some areas, it is that
18 this framework be established of clean water and
19 toxic-free sewers.

20 MR. SLACK: If you are prepared to identify,
21 say, a neighborhood which is habitable and other
22 neighborhoods that are not habitable---

23 DR. MILLER: Only within a framework where
the sewers and creeks have been cleaned up.

1 MR. SLACK: And I understand why you say
2 the sewers, because it affects much of the EDA.
3 Why can't you re-examine that position, given the
4 fact that the creeks are more---

5 DR. FOWLKES: They are not self-contained?

6 MR. SLACK: But they affect a smaller part
7 of the EDA.

8 DR. FOWLKES: They affect a larger part
9 of the City of Niagara Falls as far as that goes.

10 MR. SLACK: I am not trying to argue
11 against the need for remedial work. I'm just saying
12 that, can you set aside that area? You may find
13 that it doesn't satisfy your criteria for habit-
14 ability.

15 DR. FOWLKES: I wouldn't be willing to and
16 I don't know if the rest would.

17 DR. DAVIS: I think, Joe, where your point
18 is coming from and I understand it, is that right
19 now across the United States there are communities
20 that are inhabited that have this exact situation
21 and that that is the problem, but the fact that
22 there are people living in homes in the vicinity
23 of unsecured dumps doesn't mean that we should
therefore encourage others to do that. I mean,

1 unfortunately, it's a very difficult issue and I
2 understand what you are saying but I don't think
3 that it's going to be possible, therefore, to say,
4 well, since there is pollution all over, we should
5 therefore, recognize that and put people there
6 until such time as we got it cleaned up.

7 MR. SLACK: I'm not saying to put people
8 there until you clean it up. I am saying if you
9 set up the creeks as one of your neighborhoods,
10 with that done and let's say that does not satisfy
11 your criteria for habitability, then you would say
12 that this area along the creeks is uninhabitable.
13 Would that necessarily mean areas further to the
14 south---

15 DR. MILLER: That doesn't satisfy my
16 criteria for what a neighborhood is. That is
17 becoming the tail that wags the dog.

18 DR. HUFFAKER: Let me try something. We
19 have set up the five of the thirteen that border
20 the creeks as neighborhoods and back to the CDC
21 on habitability, he is talking about the entire
22 EDA with the whole thing on one block, not
23 incrementally, but the other one is, when you
negotiate the whole business, they said it's very

1 possible that the EDA is incrementally habitable.
2 That is what Joe is talking about here now. The
3 quote that you have that you were just reading from
4 which is absolutely directly straight out of the
5 CDC report, word for word, it may be an inappropriate
6 quote considering he was taking the entire EDA in
7 one chunk and not breaking it up in any smaller
8 points.

9 Then we have another problem. What do we
10 do with the north side of those creeks if we decide
11 the south side is not habitable. Logic would say
12 that something else should occur as far as the rest
13 of it goes. How uninhabitable is it? Is it not
14 habitable enough so you can't move people back in
15 but not bad enough to move anybody out? You have
16 to deal with that thought.

17 DR. WINKELSTEIN: I would like to hear
18 from Glenn and Fred, whether they are interested in
19 modifying their positions on that.

20 DR. SIPES: My original assumption was
21 exactly as it was stated there, that these were
22 prerequisites and then the indicator chemicals were
23 sort of the second phase type of monitoring, if I
could use that word. So, I think that you pointed

1 out what I had, when I read that, interpreted it
2 that way, that that was A and then B would follow
3 through with the other Love Canal indicator
4 chemicals.

5 DR. POHLAND: You know, it's unfortunate
6 that today is the first time we found out about the
7 intention of separating the sewers from the creeks
8 because our strategy of approach with regard to
9 community structure, neighborhoods, if you will,
10 how we are going to set up our comparisons, how
11 the sediment samples would relate to the sewer
12 samples and so forth may have been different, I
13 don't know.

14 From a strictly technical standpoint now,
15 okay, notwithstanding what you were saying, Joe has
16 a point because what you have to focus on, the
17 sensitivity issue of that particular area, and if
18 indeed there is sound logic behind separating out
19 the remedial action for the creeks from the sewers,
20 then it should at least be examined to see how that
21 kind of rationale would impact on the possible new
22 arrangement of those areas that we might be able to
23 identify with those two segments of the EDA.

Now, if that violates the integrity of

1 neighborhoods and community structures, that is
2 another issue.

3 DR. MILLER: You are creating a situation
4 where you risk, I think, moving in families and
5 children within a few hundred yards of a free flow-
6 ing dioxin, bed of dioxin, granted with a fence on
7 it, but---

8 DR. POHLAND: Okay. Those are the neigh-
9 borhood, social issues that I don't presume to
10 address and you know, if they are really the
11 priority issues that must be incorporated and
12 embraced in the final decision, then---

13 DR. FOWLKES: Even to take the most
14 conservative approach or to follow through with
15 what you are saying, it doesn't matter how these
16 neighborhoods are drawn, that simply eliminates
17 everything north of Colvin, period. I mean, it
18 doesn't matter how this is drawn. It all borders
19 on Bergholtz and Black Creek which runs through the
20 middle of it.

21 DR. POHLAND: Yes, I understand the
22 arbitrary nature of the way things were originally
23 designed.

DR. MILLER: No, it is the way God put the

creeks down here.

1 DR. POHLAND: No, but I mean where they put
2 the limits in the EDA. It doesn't really make much
3 sense in my mind either that you would only look at
4 one side of the creek and not the other side.

5 DR. FOWLKES: Right, but all I'm saying is
6 that even to follow along with what you and Joe
7 were saying, it is relevant how we have drawn these
8 subareas. You have just eliminated the habitability
9 and viability of everything north of Colvin because
10 that is where the free flowing water is.

11 DR. POHLAND: If that is it, so be it.

12 DR. FOWLKES: Well, then---

13 MR. SLACK: I would categorize it a little
14 bit differently. If we assume the creeks are bad
15 and that the area is not habitable, then it would
16 preclude the habitability of every area that
17 borders on the creeks and that is in fact the way
18 you have drawn it.

19 DR. FOWLKES: No, no, no. That is not
20 how we have drawn it. It is the broad outline
21 here north of Colvin. Our border is on Bergholtz
22 Creek and dissected by Black Creek.

23 MR. SLACK: And if your neighborhood had

1 been drawn as a band adjacent to the creeks, then
2 the band would be uninhabitable but not every area
3 that touches the creeks.

4 DR. FOWLKES: No, that is really not
5 correct.

6 MR. SLACK: Now it is a matter of how you
7 have drawn the boundaries.

8 DR. FOWLKES: Not really. I mean---yes,
9 if you are saying you can jerryrig the boundaries
10 to create artifacts in order to somehow preserve the
11 uninhabitability of the creeks, then I see what you
12 are saying, but it's jerryrigged. It is jerryrigged
13 and it is not viable and I couldn't in all good
14 conscience create some of the kinds of things that
15 you are talking about, knowing that it is ringed
16 around with contaminated water, free flowing water
17 waste.

18 DR. STOLINE: I would like to interject
19 something that goes clear back to when you first
20 started talking, Joe. It seems to me that the
21 separation of the creeks from the sewers was kind
22 of because of the new development with the 93rd
23 School and that tangles in there because that is
 apparently something, the contamination there

1 somehow is getting into possibly Bergholtz Creek
2 and Black Creek and that means that that gets put
3 off because---I wasn't sure but it's apparently a
4 problem that maybe you don't have a plan on that one.

5 MR. SLACK: It appears to me that if we
6 keep the creeks and sewers together, all we end up
7 doing is delaying the creeks and sewers because it
8 doesn't appear to me we can speed up the creek clean
9 up. So, that is why we proposed to separate it.
10 Otherwise the sewer clean up would have been
11 delayed even beyond '85. What caused the delay of
12 the creek clean up?

13 DR. STOLINE: Yes. Why is that taking
14 such---why is that the one that is going to take
15 more time?

16 MR. SLACK: In the state there is a program
17 to investigate rather preliminarily any site that
18 is known to have received hazardous waste and they
19 completed that investigation at the 93rd Street
20 School and that involved collection of, I think,
21 just four samples, some groundwater samples, I
22 think some soil and at least one surface water.
23 They found dioxin at least in the surface runoff on
the site and to me to then go ahead with the

remedial program in the creeks and say to everybody,
1 everything is acey-ducey when we know we already
2 have a site where there is some possibility of,
3 for either recontaminating the creek or the site
4 itself should be remediated, the 93rd Street School
5 property, that isn't very responsible. That is
6 why we think the creek clean up has to be delayed.

7 DR. STOLINE: It seems to me, this is
8 somewhat of an aside, but if you look at the flow
9 chart that we have which is a yes/no kind of thing
10 depending on whether things are detected or not,
11 we have a hot spot here, something that maybe I
12 shouldn't call it that, but there is an area that
13 gives us cause to look at it and that is the 93rd
14 Street School and the question there when you go
15 into that part of the box of the flow chart is, to
16 make a decision whether in fact you remediate it or
17 not, and I think you are talking here about this
18 time scale is what really is, I think is pertinent
19 here because, first of all, there is no plan that I
20 know of to do anything at this particular point
21 because of that contamination and we are talking
22 here about that kind of holding up things for at
23 least two years, maybe three years before something

1 can be put down on a piece of paper as far as even
2 a plan to proceed.

3 So, that is really---really, that whole
4 thing, that whole 93rd Street School, that hot spot
5 that has been detected there, whatever you want to
6 call it, is really impinging right now on this
7 committee's work as far as I can tell. Is that a
8 fair characterization?

9 MR. SLACK: I think you are correct and all
10 I am asking you to consider is the creek as a hot
11 spot and that areas that border the creek and
12 obviously this is my opinion, you will likely find
13 to be uninhabitable. If the areas that border the
14 creek don't include all the areas, then you may find
15 other parts of the EDA habitable and it's a matter
16 of how you draw your boundaries. Just as you might
17 have found the 93rd Street School to be a hot spot,
18 I ask you to consider the creeks as a hot spot and
19 not affecting the habitability of the entire EDA.

20 DR. FOWLKES: But you are determining the
21 neighborhood on the basis of where you know the
22 contamination to be and that is about the opposite
23 of how the committee ought to go.

DR. POHLAND: There is a possibility on

1 the implementation part of these criteria, that the
2 decision should be defensibly made that what you
3 are suggesting could happen but what we are saying
4 to you is that until that evidence and information
5 is available to us, we are saying that we are going
6 to---I think I hear us saying that we are going to
7 stick with our original position on this. I think
8 there is enough flexibility in the criteria to
9 allow for scientific reasons, technological judgments
10 in the implementation actions.

11 Now, it's up to you as the implementing
12 agency to make sure that those things are proceeded
13 with.

14 MR. SLACK: I understand.

15 DR. POHLAND: And I think you are asking
16 us to presume that your scenario between the sewers
17 and the creeks outweighs what I hear my colleagues
18 here talking about with regard to the integrity of
19 the neighborhoods.

20 MR. SLACK: I won't ask you to make an
21 assumption. I will try to, in the stuff you have
22 asked for, the schedule of the work, the planned
23 activities, to lay it out on the basis of the best
of my knowledge that I can present it and then you

can make your own decisions.

1 DR. POHLAND: Yes, and I think that is a
2 valuable addendum to our document anyway because I
3 think whoever is going to be responsible for making
4 the ultimate decision and the implementing of the
5 actions that can't be implemented during the time
6 that we deliberate, that that certainly will be
7 valuable with regard to guidance.

8 DR. FOWLKES: Again I think the point is,
9 Joe, that the EPA found the EDA uninhabitable with
10 the present state of contamination. If the area in
11 general is found uninhabitable for that reason, why
12 then would smaller areas be inhabitable? I guess
13 I am really not agreeing with your reasoning. You
14 see---

15 MR. SLACK: We may have to agree to disagree

16 DR. FOWLKES: We certainly do because I am
17 saying that even to get rid of all these neighbor-
18 hoods, the EPA would have found anything north of
19 Colvin minimally uninhabitable because of the
20 contamination of the creeks. So, there is no
21 earthly reason why even smaller pieces of it would
22 be habitable.

23 MR. SLACK: Thank you, Tom. That is all I

have.

1 CHAIRMAN WELTY: Okay. I think between
2 now and when we break for lunch, Martha and Pat,
3 could you present anything in addition to what you
4 have submitted in writing with regard to the neigh-
5 borhoods and we will have an opportunity for
6 pertinent comments from the public at this time
7 with regard to the neighborhoods and we will hold
8 off on the dioxin comment until after lunch. Will
9 you be here after lunch?

10 MR. PITRUZZELLO: Yes.

11 DR. FOWLKES: I don't think we have any-
12 thing to add, simply to emphasize that this is a
13 way of coming to terms with a house by house
14 approach that considers the individual house in the
15 social context and that the neighborhoods are drawn
16 not so much to reflect where individual people did
17 their daily businesses with whom, but to organize
18 the area into what we feel are logical, definitive
19 social residential groupings. That was our language,
20 which, if they were found to be habitable as an
21 entity, could be functional as an entity. That is
22 to say if they were safe, they could also be resi-
23 dentially viable.

1 There is really just one modification to
2 our proposal as it's represented in the draft that
3 we want to make and I think it's our fault because
4 our language may not have been as clear as it should
5 be. Our thinking with the decision tree which was
6 on page 8 was that where we begin with a house by
7 house approach having taken the general area, the
8 subareas, and we are working now within a subarea
9 that would have been declared potentially habitable
10 on the basis of the sampling, it was that the
11 individual house be tested for indoor air and if the
12 air is found not to be up to comparison standards,
13 that at the same time soil and groundwater on the
14 lot be tested, that is, the soil and groundwater.
15 In the decision tree model, in the event that the
16 air fails the test and would follow the yes, the
17 next step is not remediation to control levels,
18 the next step is to testing of soil and groundwater
19 to determine the extent and location of contamination
20 issue and if it proves to be a problem of bad air
21 without soil and groundwater, that also doesn't
22 measure up to the individual house, then we go to
23 remediation.

DR. MILLER: But we would remediate in

1 either case. The point was that when the house
2 failed, that became the signal, the occasion for
3 doing a comprehensive analysis of a house and its
4 lot and the water on it to determine the source of
5 the problems comprehensively and then to assess the
6 efficacy of remediation.

7 CHAIRMAN WELTY: Let me just speak to the
8 way I had envisioned this work and see if it is the
9 way the rest of the consultants feel about this. If
10 there is an increased level of a specific chemical
11 and we can identify that it's coming from a certain
12 household product, and removing that product and
13 then retesting the air corrects the problem, I
14 didn't see that there would be a need for further--

15 DR. MILLER: I see what you are saying.
16 That is not what we are speaking to. Most of
17 these houses are uninhabited, though.

18 CHAIRMAN WELTY: Not all of them, though.
19 I mean---

20 DR. FOWLKES: Well then, we have to have
21 a modification that specifies in the event the
22 house is inhabited, fails to meet the air test, is
23 searched for obvious sources of contamination, but
the overwhelming majority of those houses are

1 noninhabited and I think that was our frame of
2 reference. So, if you want to allow for the two
3 categories there, where something could be removed
4 that could be causing that, then that is, it seems,
5 to be reasonable.

6 CHAIRMAN WELTY: It seems we could
7 incorporate that into the revision, that suggestion.

8 DR. FOWLKES: Where houses are presently
9 inhabited, yes.

10 CHAIRMAN WELTY: Yes.

11 DR. FOWLKES: But then we are following
12 through in another kind of line of thinking where in
13 the uninhabited houses, see, the thinking is that
14 if the air in an uninhabited house is bad, that that
15 may be an indicator of more pervasive contamination
16 on the lot, in the water and so on.

17 CHAIRMAN WELTY: I'm not sure when you say
18 testing the water, the way the document deals with
19 that in the control area is to utilize the parti-
20 tion coefficients from the soil testing to estimate
21 the contamination of the water and if you are talk-
22 ing about drilling wells in these yards---

23 DR. FOWLKES: No, no. We are using the
same procedures only now we are not doing random

1 sampling. We have some reason to zero in on the
individual house and use the same---

2 CHAIRMAN WELTY: I just wanted to be sure.

3 DR. FOWLKES: We are also testing for
4 water, that is all.

5 CHAIRMAN WELTY: One of the points that
6 Dr. Huffaker was concerned about had to do with the
7 lower part of figure 2 there where having a poten-
8 tially habitable neighborhood, assess the effect of
9 any nonhabitable houses and we were wondering if
10 you had any specific recommendations on how this be
11 done.

12 DR. FOWLKES: I think we have talked about
13 this, Tom, and what you said to me was Dr. Stolwijk
14 thought we ought to draw a quantifiable criteria
15 and what I said was, I don't agree with Dr. Stolwijk
16 and I think we still take that stand that I would
17 accept only an apriori criteria that it is all or
18 nothing, that one house renders the area uninhabit-
19 able or that what we have at issue here is a
20 qualitative decision, not a quantitative one and
21 that can only be assessed on the grounds, so to
22 speak, after these houses are assessed and somebody
23 has a chance to see the lay of the land and what the

1 impact is, of where they are and how many they are
2 and I don't think that it's possible to quantify
3 what is essentially a qualitative consideration. I
4 mean, it may be possible only to say, if you insist
5 on quantifying it, then I insist on being as cautious
6 as possible and ruling on a subject area on the
7 basis of one uninhabited house.

8 DR. DAVIS: I am a little confused here and
9 perhaps you can clarify this for me. Is the point
10 of discussion where a house is found not to be
11 habitable because it's contaminated?

12 DR. FOWLKES: And cannot be remediated.

13 DR. DAVIS: And cannot be remediated,
14 therefore, that subgroup or subarea in which the
15 house occurs is not to be considered inhabitable,
16 correct?

17 DR. FOWLKES: Well, if we insist on quanti-
18 fying this on the front end in terms of what is the
19 criteria for how many houses and where. See, we
20 had suggested that once the area has been assessed,
21 that some sort of consult be available with us or
22 anybody else but that it be assessed qualitatively
23 in terms of what is the impact of this particular
array or distribution of these many uninhabitable

houses on the residential viability of this subarea.

1 DR. DAVIS: I am still confused then.

2 Looking at the thing that Joe wrote there, we are
3 talking about if in one of those squares there is
4 one uninhabitable home, correct, that is the point?

5 CHAIRMAN WELTY: Yes. That is the point.

6 DR. FOWLKES: That is what we said, all or
7 nothing.

8 DR. DAVIS: Right and then I thought we
9 had said all or nothing, that is to say, if there
10 is one home that is not suitable for habitation in
11 one of these, then the whole area should be regarded
12 as not suitable and I think that the reason you are
13 saying that has been, and the rationale has been
14 both sociological and also in some sense quasi-
15 scientific because the thinking is if one home is
16 documentable---

17 DR. FOWLKES: Sociology is not mutually
18 exclusive from science.

19 DR. DAVIS: Let me correct that.

20 DR. FOWLKES: There is a sociological,
21 scientific rationale.

22 DR. DAVIS: Forgive me. I am sorry.
23 Your point is well taken. I am trying to

distinguish between the social science information
1 that goes into this decision and the natural science
2 that goes into the decision and my terms were not
3 well chosen but the point I was trying to make is
4 that there would be sociologic reasons for rejecting
5 having one house be uninhabitable but in addition,
6 there would be natural scientific reasons as well,
7 namely, if one house you could detect something in,
8 thinking of the Barry-Day paper and the issue
9 Dr. Stoline raised about nondetectability, if you
10 can detect contamination in one home, then there is
11 some concern that this may ultimately spread to more
12 than one home in some way.

13 DR. FOWLKES: Or ultimately be more wide-
14 spread.

15 DR. DAVIS: Or be more widespread than we
16 are now able to detect and for that reason I think
17 in the previous discussions that I recall, our view
18 was that if there was one house that was not inhabit-
19 able, then that subarea should be considered non-
20 habitable.

21 DR. FOWLKES: That has been our view too
22 and there is continual, I think, pressure to modify
23 that, to say, oh, come on now, you know, not the

whole area, and I am unwilling I think to specify
1 a criteria to that effect.

2 DR. HUFFAKER: I am guilty of putting that
3 box in there with that language but I got it, I
4 thought, from correspondence with you where you said
5 someone was going to assess the effect of the---

6 DR. FOWLKES: Well, only because after being
7 pushed on the issue, I mean, we have held on to all
8 or nothing, but if in fact we are going to---we are
9 not going to hold to the all or nothing and there is
10 some feeling that what we should really be doing is
11 specifying 80 percent of the houses habitable, I am
12 not willing to make that kind of specification.
13 The furthest I would move on that is that some assess-
14 ment then be made of the neighborhood and where those
15 houses are and how they impact and that cannot be
16 drawn off on the front end.

17 DR. WINKELSTEIN: Well, I think the prob-
18 lem comes down to the question of how you decide
19 whether a neighborhood is habitable or not. If you
20 decide that a single house eliminates a neighborhood,
21 then I think you are obligated almost to test every
22 house in determining whether the neighborhood is
23 habitable. If, on the other hand, you are willing

1 to set some kind of other criteria, namely, that on
2 some kind of a sampling scheme which is not spelled
3 out, a neighborhood can be determined habitable,
4 I think you have to make that distinction because
5 clearly if one house makes a neighborhood nonhabit-
6 able, then the only way you can determine whether
7 a neighborhood is habitable, applying logic, is to
8 test every house.

9 Now, if that is not what you want to do,
10 then you have to make a different decision. So,
11 it's a question of the committee making a choice
12 in the criteria for determining whether a neighbor-
13 hood is habitable unless, again, unless I misunder-
14 stand.

15 CHAIRMAN WELTY: Well, all of the houses
16 are proposed to be tested for indoor air and based
17 on that test---

18 DR. WINKELSTEIN: If that is clear then,
19 it makes sense if that is your decision, then one
20 house that is nonremediable makes the neighborhood
21 noninhabitable.

22 CHAIRMAN WELTY: Well, one of the terms I
23 had was, if you had a house that has indoor air
pollution and you can't find out where it is coming

1 from, coming from the soil, and if you look on the
2 decision tree, if the soil concentrations are okay,
3 then why would that one uninhabitable house make
4 the neighborhood uninhabitable?

5 DR. DAVIS: Then you have to find out what
6 the source is of the contamination and remediate it.
7 For example, if you have inappropriate application
8 of fluoridane heptachlor in a home, you can get
9 levels that would make the house uninhabitable for
10 the reasons of the point source specific application
11 of fluoridane heptachlor and there are some homes
12 in this country nowadays where that has happened and
13 I think that perhaps that that may be a valid
14 exception. We are talking about where the home is
15 contaminated with LCIC chemicals.

16 DR. FOWLKES: And can't be remediated.

17 DR. DAVIS: And I think that might be the
18 way to specify. However, if there is another kind
19 of contamination as, for example, undue lead paint,
20 or asbestos tiles in the ceiling or fluoridane
21 heptachlor, I don't think that would make the
22 neighborhood uninhabitable.

23 DR. FOWLKES: But those are remediable
sources.

1 CHAIRMAN WELTY: So it may not become a
2 big issue. Most of these problems may be remediable.
3 We may not be faced with this problem very often. X

4 DR. DAVIS: Those problems should be
5 remediable. Fluoradane heptachlor may not be so
6 easy.

7 DR. HUFFAKER: But we have remediated some
8 houses already by simply destroying the house. The
9 house no longer exists.

10 DR. FOWLKES: That is right and if the lot
11 shows there is no sign of contamination in the
12 order of soil, then the remediation may be to
13 destroy the house but you have not put it down
14 adjacent to a vacant lot which is contaminated. So
15 if remediation involves destroying the house and
16 leaving a lot that is habitable, in effect, that
17 then just becomes a lot as part of the neighborhood.
18 You haven't violated the criteria that we worked
19 on, that we have spelled out here.

20 CHAIRMAN WELTY: Yes.

21 DR. SIPES: Because we will have monitored
22 the soil, et cetera, so then there is nothing found
23 there, you would assume that it's an unidentifiable
source in the house that can be destroyed.

1 DR. FOWLKES: Or it may be an identifiable
2 source in the house that is too complex or costly
3 to remediate under some circumstances. Therefore,
4 you don't preserve the house but you have intro-
5 duced a contaminated lot into the middle of the
6 residential neighborhood.

7 DR. WIESNER: Tom, I don't want to fore-
8 close this discussion. I think there is a general
9 question that I would like to have Pat and Martha
10 think about and maybe the other people to think
11 about too because---and if that is done, I will
12 bring this other one up. If it is not done---

13 CHAIRMAN WELTY: Let's bring it up and then
14 also I want to leave some time for the community
15 if they have anything.

16 DR. WIESNER: This question has come up
17 through the discussions and earlier ones and that
18 is the factor of time, in terms of how long does all
19 of this take to get done and I wonder, not to
20 complicate things, but I wonder about the sociologic
21 perspectives of, is there a limitation on time that
22 you would put to say, I mean, you are making deci-
23 sions now, you are talking to the community and
looking at these homes and if this whole process

takes fifteen years, I mean, that is an overstatement
1 I think, but if this whole process takes fifteen
2 years to complete, would your descriptions of a
3 sociological and acceptable, viable neighborhood
4 still apply when these houses are falling down,
5 have to be repaired?

6 DR. FOWLKES: You don't need a sociologist
7 to respond to that.

8 DR. WIESNER: Well, fifteen years, I know
9 that wouldn't apply but now I'm going to back up,
10 back it down to, if it is four years, would it still
11 apply and if it's seven years would it still apply.
12 Do you want to put a time factor in your questions
13 of viability for the neighborhood? I think it is
14 a very important item and---I mean, with fifteen,
15 I think we could all conclude without any training
16 in sociology but when you get down to, is there a
17 time factor? Can I just apply this into perpetuity?

18 DR. WINKELSTEIN: I gave this some thought
19 this morning, about 45 minutes ago when we were
20 discussing this time issue surrounding the remedial
21 work, I started thinking about this. It would seem
22 to me that if the criteria document that we have
23 developed is reviewed and accepted, it wouldn't have

1 to wait until after the remedial work was done to
2 begin to evaluate the criteria. You would, I would
3 think, begin immediately the implementation, the
4 design, sampling plan. You would identify the
5 control areas. You would put in place the air
6 sampling, soil sampling and water sampling and you
7 would begin all that work immediately even though
8 you knew that the prerequisites are still not
9 completed, that they are going to go on as if they
10 were simultaneous. What the document says is its
11 application of the criteria would not be done until
12 after certain other things were done.

13 So, I think it's obvious that if there were
14 some delay in being able to apply the criteria and
15 certainly it would seem to me that some reasonable
16 time period, if it were delayed beyond four or five
17 years, obviously, you would have to re-examine the
18 criteria because they might change. These are not
19 remutable. So, I would think that one would have
20 to use some judgment but I think the important
21 thing is that, in fact, the whole thing would not be
22 credible unless, because you can see what has
23 happened with respect to other activities at Love
Canal, if this document, these proposals are

1 accepted after the review process, one would expect
2 immediately things to begin to happen. If they
3 waited for three or four years until the creeks and
4 the sewers were cleaned up and only then did the
5 State Health Department or whoever was authorized
6 to implement them begin establishing a sampling
7 plan, it would be another three or four years.

8 DR. WIESNER: It's easy for me to think of
9 the long delays that can obviously be discarded but
10 the question I'm asking is, do you want to incor-
11 porate into your criteria a time factor that says,
12 unless these criteria are applied, implemented and
13 applied and decided upon within X period of time,
14 these criteria are not operative.

15 DR. MILLER: But really you are talking
16 about concerns, that is, building codes, is it not?
17 I mean---

18 DR. DAVIS: I don't think he is talking
19 just about the buildings. I think he is talking
20 also about the sociological viability of the neigh-
21 borhood. There are areas, for example, DeNore,
22 Pennsylvania in 1948 had a population of about
23 45,000 people and had the world's largest nail mill.
It is now, because of the shutdown of U. S. Steel,

1 there are approximately 7000 people there and the
2 industrial base, the social base and the number of
3 churches, schools, it is just no longer a viable
4 community. It's a shrinking, disappearing town.

5 So, Love Canal is that now and I guess the
6 question is, how much longer can it exist as a
7 community in the fractured state in which it is now.

8 DR. FOWLKES: Is that what you are asking?

9 DR. WIESNER: Yes.

10 DR. MILLER: But I mean, the comparison you
11 are making, I am not persuaded is the best one
12 because the economic--the point is well taken but
13 the economic base continues to be here. The
14 housing market, to the best of my knowledge, is
15 excellent. I mean, there are more people looking
16 for housing than there seems to be housing. You
17 know, there are problems created by deteriorating
18 inner city that are pushing population out. The
19 housing in this area of the city is extremely
20 attractive or was before the whole business broke.
21 The desirability of it as a residential setting,
22 at least for the near future, doesn't seem to be
23 in question.

So, the issue then becomes, when you open

1 it up, are you effectively creating a new subdivision
2 and I suppose in a manner of speaking there is that
3 risk that one runs, that that is what it will
4 resemble.

5 DR. WINKELSTEIN: The possibility of putting
6 a time limit in, though, might be helpful because
7 it might precipitate action. So, I think it would
8 be---I would be perfectly willing to talk about
9 that.

10 DR. MILLER: But also the assumption that
11 I have made all along is that nothing, no property
12 will be sold until it meets building codes and maybe
13 we need to see that as well. I mean, that is part
14 of it.

15 DR. FOWLKES: What you are saying is that
16 there is a built in time constraint and that is what
17 you mean and that would be far enough. Never mind
18 the issue of chemicals, toxicity or habitability.
19 In chemical terms they simply won't be viable
20 residential structures.

21 DR. WIESNER: Or it's not a recoverable
22 community after so much more time.

23 DR. FOWLKES: And there is another reason
for breaking it off, it adds pressure to the system

1 but is there a basis for making that from a
2 sociological point of view.

3 CHAIRMAN WELTY: Fred, you had a comment.

4 DR. POHLAND: Yes. Well, the point I was
5 going to make, notwithstanding the thought of putting
6 a time limit on this process, I'm not sure that
7 under the circumstances any one of us has that kind
8 of wisdom to suggest that they would know how to or
9 how long it would take to bring this thing to some
10 successful fruition with regard to the criteria.
11 I think we are really talking about elements of
12 implementation that have certain constraints that
13 determine the time limits that certain things can
14 be done.

15 I guess I would also extend that beyond the
16 situation here. I think, notwithstanding the fact,
17 again, that whatever we do here is certainly going
18 to have an element of precedent with it as it
19 relates to other sites and I think our weakest
20 foundation for decision may well be on this issue
21 on time. Now, I don't have any way that I could
22 justify saying, unless our sociologist friends have
23 five years is the time that this must be done. I
just can't deal with that.

1 DR. FOWLKES: I think it is already at
2 risk of not being recoverable the way you suggest
3 but I wouldn't begin to predict how much longer
4 time.

5 DR. WIESNER: So you couldn't even put
6 yourself in the situation that if it took longer
7 than X number of years, that in the sociologic
8 perspective, that these criteria would need to be
9 re-evaluated.

10 DR. MILLER: Well, the issue of the age
11 of the structure of the existing community in that
12 community is specified.

13 DR. WIESNER: If it can't be done, it
14 can't be done. I don't know.

15 CHAIRMAN WELTY: These are a couple of
16 points, though, that probably should be followed up
17 and then we would want to have some input from the
18 community. Dr. Winkelstein has just said that as
19 far as he is concerned, we can go ahead and start
20 collecting the necessary information to implement
21 these criteria even before the creeks and sewers
22 are cleaned up. Is that the general agreement or--

23 DR. WINKELSTEIN: Not necessarily collect-
ing the specimens but you certainly would have to

1 have a plan. I mean, a working---implementing these
2 criteria is not possible. You don't do it next
3 week or the week after that. I mean, there is the
4 selection of the control community, there is a
5 huge design problem involved here. There is pre-
6 testing, you know, there is establishing lines of
7 logistics. That is all I am talking about.

8 CHAIRMAN WELTY: The scenario here is that
9 it has been presented, that the sewers possibly
10 will be cleaned up this summer and the creeks the
11 following summer. So, there is a dioxin sampling
12 plan that we are going to talk about here.

13 Is there any reason to delay that until the
14 creeks are cleaned up?

15 DR. WINKELSTEIN: It will take you that
16 much time to design and pretest the proper system.
17 I am not a bookmaker but gee whiz, there is a chance
18 to make a good book here.

19 DR. DAVIS: Let me add to that another
20 issue I was going to make with regard to the
21 editing of the comments on the final document.
22 Concerning the appropriate control area, that is
23 not an easy issue at all and I am not sure that it
should be a residential neighborhood in Western

1 New York. It may have to be some place similar to
2 but not Western New York, but I certainly think that
3 it should be an area which has no previous history
4 of environmental contamination or which otherwise
5 exceeds current ambient environmental standards and
6 I think that you could be walking into a real tough
7 issue if you pick an area where there had been, you
8 know, uranium dial pager or phosphate dumping or
9 any host of other activities that have gone on in
10 the industrial northeast for a long time and if we
11 don't stipulate that this so-called control area
12 should not have a history of or obviously current
13 pattern of contamination, that could leave you wide
14 open.

15 One of the criticisms made of the cyto-
16 genetic study was that some of the controls were for
17 occupationally exposed and therefore it really wasn't
18 a suitable study design and you have an area of the
19 northeast here where there are several hundred
20 hazardous waste dumps in a several county area, as
21 you all know, and I think it poses a very serious
22 problem.

23 CHAIRMAN WELTY: We have that on the
agenda as item number 7 so if we could just postpone

that discussion until---

1 DR. DAVIS: Fine. I just wanted to support
2 Warren's comment that you need to start now. There
3 should be no problem in collecting the control area.
4 It's going to be complicated to do it and it may well
5 take you 18 months to figure out exactly what is a
6 good control and if this is going to be done, if
7 the TRC decides to go this way, you need to start
8 to do that now.

9 CHAIRMAN WELTY: Anita, do you have any
10 comments?

11 MS. GABALSKI: I have five individuals who
12 would like to make a statement.

13 MR. SLACK: I would like to comment on the
14 neighborhood selection. If you would like me to
15 wait until they speak, that is fine but like to
16 come back to this definition of neighborhoods.

17 CHAIRMAN WELTY: Why don't you go ahead
18 now then and then we will have the community, they
19 can have the benefit of your wisdom.

20 MR. SLACK: Whether they want it or not.
21 Thank you.

22 Here, the neighborhoods are represented
23 here, if you want to use those.---I will use my sort

1 of very simple plan, I have a dichotomy of sampling.
2 One is that all the neighborhoods bound on the Love
3 Canal and in another, only one neighborhood bound
4 on the Love Canal. Given the fact that we are going
5 to decide whether neighborhoods are habitable on an
6 all or nothing basis, I think our results are going
7 to be largely affected or much affected by the
8 boundaries we establish for these subareas within
9 the EDA.

10 I think the purpose of dividing the EDA
11 into subareas originally was for purposes of sampling
12 and for comparison, if I am not mistaken. The EPA's
13 work was different strata would be sampled and then
14 compared with one another in order to determine if
15 there was a significant difference between what was
16 found in one subarea and another, if I am not
17 mistaken. That was eleven strata they had.

18 My question is, given the fact that you are
19 now recommending that each and every home within
20 the EDA be sampled, why not do that and then define
21 the area which is uninhabitable and then see if the
22 area outside of that can be fashioned in the neigh-
23 borhood to have some viability rather than up front
almost determining that large areas within the EDA

1 are going to be found to be uninhabitable because
2 possibly one home within that subarea is going to be
3 found to be uninhabitable.

4 Secondly, if we do this by sampling all
5 the homes and decide that certain areas are habit-
6 able and other areas are not habitable and we don't
7 keep in mind that Love Canal is the source, how do
8 we monitor to continue to assure people that these
9 areas found habitable are going to be habitable in
10 the future?

11 I think your design in your sampling pro-
12 gram has to be---always keep in mind that this is
13 the source and you are sampling from a source to
14 areas removed from the source and by setting up
15 neighborhoods, one home within which will define a
16 whole area as uninhabitable, I think ignores that.
17 I think if we are going to sample every home, then
18 sample every home and after we get done doing that,
19 there may be an area within the EDA that we decide,
20 based on our criteria, is uninhabitable. Are these
21 areas outside, are they viable communities or
22 viable neighborhoods or not? Let that decision be
23 made at that time, not up front. I ask you to
consider that.

CHAIRMAN WELTY: Anita.

1 DR. MILLER: Do you want us to respond to
2 that or just to consider it?

3 CHAIRMAN WELTY: Could we take the comments
4 from the community now and then we can respond to
5 the community comments and Joe's comments probably
6 after lunch.

7 Anita.

8 MS. GABALSKI: Okay. There are five
9 individuals who would like to comment.

10 We are ready for the first question,
11 Sister Margeen.

12 SISTER HOFFMANN: Well, I have three ques-
13 tions. I think I understand correctly but is it not
14 true, Mr. Slack, that there have been four alterna-
15 tives for disposal of the creek and the sewer
16 materials that have already been made, one being to
17 put them in barrels and bury them in the Canal;
18 second, to put them in barrels and bury them in a
19 secure landfill; third and fourth ones perhaps some-
20 one else can supply, I think that is big and little
21 barrels in the same area. All right.

22 MR. SLACK: Are you questioning, when I
23 said I could name three, could there be more than

three?

1 SISTER HOFFMANN: My question relates to
2 Dr. Pohland's remark, aren't the alternatives--are
3 they there already to examine and then the pros and
4 cons of each alternative. Do you have a favorite?
5 I thought that was what he was saying and why is it
6 your favorite. Then it follows on that that how
7 long will we get to---we being the public---get to
8 comment on those alternatives so we can review
9 those, examine them, the pros and cons of those
10 alternatives.

11 Next, I would like Joe also, either on his
12 own behalf or for the DEC, to continue or to lay out
13 for me what I think has been an underlying bone of
14 contention between public participation and decision
15 making. You alluded that there is a---I'm going to
16 make a qualified statement here, a personal value
17 judgment that there is a vast different between
18 public participation and decision making and I think
19 maybe that is sometimes where the twain doesn't meet.
20 You mean public participation as being merely
21 advisory or informing through one way communication,
22 through newsletters, et cetera, versus decision
23 making which has a whole host of implications.

MR. SLACK: Was that addressed to me?

1 SISTER HOFFMANN: Yes, a definition between
2 public participation, and as I understand it, there
3 is a difference between those two, and if you have
4 got a real simple definition so that we know where
5 you are coming from and then we could have a chance
6 to say where we are coming from with our definition,
7 maybe we have got to sit down and negotiate that.
8 You can answer that and I will just give my last two.

9 I think that the CECOS Dupont situation
10 in this community, Mr. Daggett's remarks, this all
11 going on and talking about the community meeting
12 tonight which I understand is going to take place,
13 they do impact on the decisions you make here. This
14 isn't a separate community. It's a city. All of
15 these things are taking place within a city. I
16 would not comment on it sociologically but I submit
17 that technical decisions, scientific decisions,
18 quasi-scientific decisions and sociological decisions
19 and economic decisions cannot be separated because
20 equal justice, which include environmental problems
21 and economic values, impinge on all of these areas
22 and on our life, how we inhabit this place and,
23 therefore, equal justice is always social justice.

Thank you.

1 CHAIRMAN WELTY: Joe, are you ready to
2 respond to those now or---

3 MR. SLACK: I will try to respond to the
4 questions about the public participation in the
5 decision on disposal. Is that fair enough, Sister?

6 SISTER HOFFMANN: Yes.

7 MR. SLACK: Okay. When did we meet last
8 and lay out a schedule for public participation in
9 the decision on habitability? Was that at the
10 Geraldine Mann School, I think you were there, and
11 Nunzio was there. When was that, October?

12 SISTER HOFFMANN: That was the 26th of
13 October, I believe.

14 MR. SLACK: At that meeting I think we had
15 a plan that involved, just to get a decision,
16 public involvement in the decision on habitability,
17 it would take something like six to eight months.
18 I view my responsibilities of trying to get the
19 remedial work done at the Love Canal, the remedial
20 work which affects the habitability of the area,
21 and I think to myself, I can go with that. I can
22 just let that be the time frame it takes us to get
23 a decision on disposal and suffer the consequences,

1 the laying of the remedial work in the sewers or I
2 can try to put together what I think is a reasonable
3 schedule for public involvement in the decision,
4 public participation in the decision, public
5 confidence in the decision, but it takes a much
6 shorter time frame and that becomes a public deci-
7 sion in my opinion. If you want this thing to go
8 on---I heard people say this is taking too long.
9 What the hell are you guys doing? It's taking too
10 long. Well, I think we can shorten up the review
11 of the alternatives and I think we can reach a
12 decision on disposal in a shorter period of time
13 in order that we might be able to clean the sewers
14 in 1985, and that is what I am pushing for. I have
15 asked Anita to lay this out in a schedule, and in
16 a newsletter, a proposed schedule, and if people
17 find it unacceptable, if it doesn't allow them
18 enough time to participate in the decision, then
19 realize that there are some consequences, that is
20 all. It is going to be a public decision.

21 I think that if we work together, we can
22 reach a decision on this in a short enough period
23 of time that we can clean the sewers this year.
That is what I am shooting for. That is my

recommendation and we will see what happens.

1 We have a series of newsletters, a series of public
2 meetings, workshops and we hope to be able to
3 exchange information with the community and reach a
4 decision around mid-February. That is our intent.

5 CHAIRMAN WELTY: Thank you.

6 MR. SLACK: It does depend upon the public's
7 acceptance, and Sister Margeen, you are involved in
8 the decision. If the timetable is wrong, if that
9 is unacceptable, then we will have to modify it
10 but I think it is my job to try to convince you
11 that let's work quickly and work together to get a
12 decision so that we can do the work next year and
13 I am going to do my part to make sure that we do it
14 next year.

15 CHAIRMAN WELTY: Anita.

16 MS. GABALSKI: Joann Hale.

17 MS. HALE: Yes. What I was wondering was,
18 you had mentioned the surface contamination at the
19 93rd Street School. Is there any---I don't know if
20 this refers to acceptance, but are you going to
21 fence it off? Are you going to fence that off if
22 there is surface contamination runoff that is
23 really accessible to the neighborhood?

1 MR. SLACK: We are going to have the EPA
2 field investigation team go to the 93rd Street
3 School, take some more samples and analyze them
4 and it may be that we will have to restrict the site.

5 MS. HALE: All right. Another thing,
6 thank you, what I was also wondering was I don't
7 remember your name---

8 MR. QUINN: Bob Quinn.

9 MS. HALE: Okay, Bob. What are some of
10 the alternatives that the EPA will not accept for
11 disposal of sewer and creek? Is there anything that
12 you will not accept?

13 MR. QUINN: For dioxin contamination?

14 MS. HALE: Yes, right, and does the DEA---
15 are they part of the decision making or are they
16 not a part of the decision making and the DEAG is a
17 part of the EPA or are they separate working within
18 the EPA?

19 MR. QUINN: On dioxin disposal, the deci-
20 sion would be made up of EPA and any decision,
21 final decision on the disposal of dioxin will be
22 made by Thomas but very much with the input from
23 DEAG and I would say that the recommendation would
have a lot of weight. As far as any alternatives

1 that have been at this point ruled out, that is not
2 the case. We are open to everything at this point.
3 To be frank, if we had ruled them out, I'm not
4 sure it would be right for me to tell you. I can
5 tell you that we want to present as many alterna-
6 tives as possible to the public in this matter.

7 MS. HALE: Why should we, as the public,
8 struggle over some alternative that has already been
9 ruled out by EPA?

10 MR. QUINN: I will be as equally frank,
11 we have not ruled out any at this point.

12 MS. HALE: I hope you have been frank all
13 along not just now.

14 Okay, what about an alternative---okay,
15 are there any alternatives that might be better
16 economically---or not economically but better sci-
17 entifically but more expensive economically that
18 you won't okay?

19 MR. QUINN: Again, I will reserve my
20 comment on that.

21 MS. HALE: That is it in a nutshell.

22 MR. QUINN: No. As far as the disposal of
23 dioxin issue, the reason why I am reserving comment
is that I have not personally been involved with

1 that aspect. So, any comment that I would make
could be erroneous.

2 MS. HALE: Is there any way that you can
3 get us the answers? I mean, this is going on,
4 whatever---is there any way you could come up with
5 an answer for us within the next few hours? You
6 have the agency here in town in the Buffalo area.

7 MR. QUINN: No. There is no way I can do
8 that.

9 MS. HALE: Is there any way that we can
10 have it so that we can---so that the community
11 doesn't struggle over six meetings again together
12 and then fight over something that is not going to
13 come about because it's not economically feasible?

14 MR. SLACK: I think that is fair and I
15 think when we give the alternatives, I think we
16 must give the alternatives with the commitment that
17 any of these are considered acceptable. We are not
18 giving you dummy alternatives to consider that we
19 already know that we wouldn't pursue. That is what
20 you are asking for.

21 MS. HALE: But before the next meeting---

22 MR. SLACK: That is supposed to be in a
23 newsletter, Joann, and it should be before the next

meeting.

1 MS. HALE: Are you going to show us why
2 you phased it out economically? I mean, are you
3 going to show us on paper that 30,000---how many
4 was that?

5 MR. SLACK: Now, wait a minute. We are
6 saying different things. Now, I am saying that it
7 seems to me reasonable that you can expect the
8 alternatives that we present to be viable alterna-
9 tives and not just to present straw issues to knock
10 down. If there are others you want to have
11 considered---

12 MS. HALE: There is no sense in getting
13 together and arguing and trying to make a decision
14 if you are going to throw them out anyway.

15 How many yards of material are we talking
16 out of the creek? You said if we were to put it in
17 drums, we are talking between 30,000 to 40,000 drums
18 possibly out of 2700 cubic yards is it?

19 MR. SLACK: I don't remember. It's 280
20 cubic yards in the sewers and I don't remember the
21 figure from the---

22 MS. GABALSKI: Doesn't it depend upon the
23 depth of the excavation too?

1 MR. SLACK: Yes and there is a rough
estimate in the Malcolm Pirnie report.

2 MS. HALE: Between 30,000 and 40,000 drums
3 possibly.

4 MR. SLACK: How did you figure that? I
5 figure about eight drums per yard because you end
6 up getting about half the stuff you get out of the
7 creek and half that you have---yes, that's about
8 eight drums to the cubic yard. If that is what
9 you used, then your number is as good as mine.

10 MS. HALE: Between 30,000 and 40,000 drums
11 so that everybody knows approximately in drums, if
12 you are talking about cubic yards of material.
13 Okay. That was it.

14 MS. GABALSKI: Violet Iadiacco.

15 MS. IADIACCO: I had several questions.
16 First of all, I wondered if Dr. Pohland had received
17 the permit that he had requested from Dr. Huffaker
18 back in September.

19 DR. POHLAND: Yes.

20 MS. IADIACCO: Okay. And another thing I
21 wanted to know is whether or not the scientific
22 panel had ever met with the Love Canal Revitaliza-
23 tion Agency as Mr. Morris had suggested that day

back in September in his letter to Dr. Huffaker.

1 CHAIRMAN WELTY: He gave us a tour the
2 first time we were here but since then, we haven't
3 had any contact with Mr. Morris.

4 MS. IADIACCO: Well, this was back when
5 Mr. Morris was here, he recommended in a letter to
6 Dr. Huffaker that you meet with the agency and I
7 wondered if you had.

8 CHAIRMAN WELTY: That has never occurred.

9 MS. IADIACCO: That has never occurred.
10 Another thing, Dr. Huffaker, would you be able to
11 tell us when the health survey done by the Department
12 of Health would be released? That is 90 percent of
13 the cases that are already settled and it's not in
14 litigation that much right now.

15 DR. HUFFAKER: It is still in litigation.
16 That is part of the problem. One study has been
17 finished. This is the Nick Vianna study that we
18 were talking about. That is one of the studies
19 that have been finished and copies have been sent
20 to the Attorney General and, well, it is in litiga-
21 tion and I think that is proper to leave it at that
22 point.

23 The other study has not been finished yet.

1 MS. IADIACCO: You have no idea when it
will be released?

2 DR. HUFFAKER: I hope very soon but I
3 can't tell you that for sure. The data is all in.
4 The statisticians have it now. I would think in a
5 month or so.

6 MS. IADIACCO: Okay and I was glad to hear
7 Dr. Davis mention the OSHA standards because when
8 we were taken through the treatment plant, I was
9 → told that some of the standards that did not meet
10 the OSHA standards and I found that kind of funny,
11 that, you know, somebody operated by the government
12 and for the government, through the government, is
13 not meeting government standards and I wondered if
14 that would be a requirement, I mean, that they
15 follow all these standards.

16 Mr. Kolac was the one that said that they
17 didn't come up to the government OSHA standards.

18 CHAIRMAN WELTY: Rick, can you comment on
19 that, please?

20 MS. IADIACCO: That was regarding that
21 drain, I asked if it met OSHA standards and you
22 said that it didn't.

23 MR. KOLAC: Okay. We have some point

sources but in the operation of the plant, which
1 gave rise to that, we were trying to remedy those,
2 the way the plant was constructed, through modifica-
3 tions which are already on the way. In fact, we
4 started working several weeks ago on that. I do
5 remember a reference, Violet, to OSHA. I'm not sure
6 how I did respond to that. We have tried in the
7 past to characterize emissions from the plant and
8 it's such a composite of materials, each one being
9 at a very low level, that we had a detection prob-
10 lem again. So, in terms of relating odors within
11 a plant with OSHA levels, we were unable to do that
12 but for the safety of our personnel primarily, we
13 did go ahead with these modifications to insure their
14 safety above all. The levels are so low that we
15 don't feel there is any impact on the community.

16 CHAIRMAN WELTY: Are the levels above the
17 OSHA standards?

18 MR. KOLAC: If you get into a particular
19 material like benzene, okay, I mean, you go there
20 and the plant, where we operate, you detect an odor
21 and when you try to single out the individual
22 constituents, they are at very low concentrations.
23 We have detection limits on it. I'm not sure if--

→ DR. DAVIS: Are you monitoring for benzene?

1 MR. KOLAC: No, we do not.

2 DR. DAVIS: Do you do any monitoring in
3 the plant? Do you have any monitoring inside the
4 plant?

5 MR. KOLAC: We have tried it on a batch
6 basis. We don't have instrumentation that we feel
7 is able to allow us to do it on a continuous time
8 frame. We are preparing some equipment shortly
9 for hydrogen sulfide hydrocarbons which will be on
10 line and continuous on an individual component basis,
11 we don't have that kind of gear.

12 DR. WINKELSTEIN: Tell me why aren't you
13 operating this plant on the state of the art? Is it
14 money? What is it? I mean, why is it with an
15 international focus on the Love Canal, I mean, every-
16 body anywhere in the world knows the name Love Canal.
17 Why isn't the treatment plant operating with the
18 state of the art, with all of the monitoring equip-
19 ment that it should have in place, et cetera,
20 because, is it money? What is it?

21 MR. KOLAC: I don't believe it is money.
22 I don't have any such restriction in that regard on
23 my part of the program.

1 DR. WINKELSTEIN: Can you tell me that the
2 plant is operated as state of the art? You know
3 what I mean by state of the art?

4 MR. KOLAC: Well, everybody has a different
5 definition of state of the art.

6 DR. WINKELSTEIN: But I would think---I
7 mean, I am just a lay person.

8 MR. KOLAC: Just let me elaborate a little
9 bit more. To a lay person it may be considered
10 state of the art, large carbon tanks, people don't
11 understand that. To those of us operating, we don't
12 consider that to be state of the art at all. It's
13 a conventional carbon treatment of the water. It
14 does a very good job. We think it is more than
15 acceptable. The materials that we collect from the
16 landfill are separated and stored on site. The
17 water is further decontaminated to meet with the
18 city's requirements before discharge.

19 DR. WINKELSTEIN: But isn't it state of the
20 art to maintain monitoring equipment in a plant of
21 this kind that would detect ordinary air pollutants
22 like benzene?

23 CHAIRMAN WELTY: You should ask Dr. Pohland
that question.

1 DR. WINKELSTEIN: I will ask Dr. Pohland
that. I just couldn't keep it down.

2 MR. KOLAC: In terms of equipment that is
3 more sensitive to air pollutants such as benzene,
4 for example, we could do a gas chromatograph but
5 there are problems in operating that kind of gear
6 in the plant where you have problems, establishing
7 your base line.

8 DR. WINKELSTEIN: Then you should have a
9 laboratory off base where you send the stuff.

10 MR. KOLAC: That is right.

11 DR. WINKELSTEIN: You have that?

12 MR. KOLAC: We don't have it for air because
13 we have tried in the past to do that and the results
14 coming back are not very meaningful. That was our
15 interpretation. What we want to do is make the
16 process more closed loop. We do have a floor drain
17 and the way the plant was reviewed and designed, to
18 accept washings coming back and when we repair a
19 pump inside the plant, inevitably you have spill
20 when you drain the pump on the floor, there is no
21 other place and eventually or after that process is
22 completed, you flush all of that into the drain and
23 recycle it back underground, not to any sewer,

1 underground holding, and then eventually at a subse-
2 quent date or thereafter, is reprocessed through the
3 plant, decontaminated. This is the way most of it
4 goes.

5 DR. WINKELSTEIN: All right. I didn't
6 mean to interrupt you. I will ask you later about
7 that.

8 SISTER HOFFMANN: May I say one thing?
9 You know, we went on the tour, some of us, of the
10 treatment plant. I think it would be very helpful
11 for this group to have a tour of that plant and I
12 understand that you shut it down for the day that
13 we were there. It wasn't in operation.

14 MR. KOLAC: That is correct. That is a
15 division policy, no tours will be given during opera-
16 tion. Some of the staff, Sister Margeen, have gone
17 through the plant many months back, not everybody.

18 SISTER HOFFMANN: Of this committee?

19 DR. POHLAND: We went through it but it
20 wasn't operating at that time either. I think maybe
21 just if I can comment on what has been said, I
22 would consider the treatment plant state of the art.
23 It accomplishes what it is designed to do, provided
that operation is maintained on some sort of

1 continuum. I didn't realize at that time that I
2 was given the privilege to see the plant that the
3 reason was that they don't operate it when people
4 go through. I thought it was due to the fact that
5 it operates rather intermittently anyway and it
6 really operates on a kind of a batch way.

7 I think we should separate out the physical
8 treatment methods that are used there from the
9 issues that might be imposed by OSHA which are
10 occupational health sort of things and safety,
11 which is another group of issues that certainly I
12 think were probably addressed when the design was
13 conceived and I suspect their being implemented as
14 well at most treatment plants.

15 Now, this doesn't deny the fact that there
16 may be some opportunities for exposure but normally
17 your contingency plans address those kinds of
18 things and I have looked at the contingency plan
19 and it's an acceptable contingency plan. I can't
20 speak to how it's being implemented because I'm not
21 there on a routine basis, but I think you have to
22 accept that these are professional people and know
23 what their responsibilities are.

CHAIRMAN WELTY: I have a request from one

1 of our consultants to eat. Are there any more
2 comments on questions that are pertinent to the
neighborhood?

3 MS. GABALSKI: We can take the rest of
4 the questions afterwards.

5 MR. LAVERDI: Well, I thought you were
6 going to hear from---before you were going to have
7 lunch, you were going to hear from the public here.
8 So, I think that you should continue on. I mean,
9 I'm hungry too but I have some questions I would like
10 to ask Dr. Miller and Dr. Fowlkes here and I have
11 been waiting all morning.

12 CHAIRMAN WELTY: Who is next?

13 MS. IADIACCO: Well, I had several more
14 that I wanted to ask. That is why I was curious.
15 Do you want me to ask them later or---

16 CHAIRMAN WELTY: Go ahead, Violet.

17 MS. IADIACCO: I wanted to ask Dr. Miller
18 and Dr. Fowlkes on your all or nothing basis, if a
19 neighborhood is declared uninhabitable, will that
20 mean that anybody who lives there now who does want
21 to stay will have to move as they did in ring one?
22 Will they have to get out? Will they have a choice?

23 DR. FOWLKES: We don't have authority over

1 that. It just means that it won't be opened up for
2 occupancy but we don't have authority over those
3 conditions.

4 MR. LAVERDI: Well, how does that look?
5 If I was living in a house that is A and it's
6 slightly contaminated and you find readings that
7 are alarming, I would have to leave that there
8 neighborhood?

9 DR. FOWLKES: We don't have that authority
10 over that. That is nothing that we can specify.

11 MR. LAVERDI: Well then, a criteria has
12 to be established for that too.

13 MS. IADIACCO: And I wanted to know how we
14 are going to address the problem of sewers under-
15 neath the LaSalle Expressway. That is still, you
16 know, it has been abandoned and still to my knowledge
17 hasn't gone into the manhole and whether or not
18 there is a basement that might be collecting a lot
19 of Love Canal contaminants that could be accumulating
20 and you are requiring that all the sewers be
21 cleaned. How will that one be addressed? I just
22 wonder if there was any way of addressing that now
23 or anything.

CHAIRMAN WELTY: Joe, do you have any

comment on that?

1 MR. SLACK: One part I can't answer. I was
2 asked this earlier. The sewer on Frontier Avenue,
3 the storm sewer which is still in service, will be
4 abandoned. That will be taken out of service and
5 plugged up. That one that runs on Frontier Avenue
6 is still in service. I know that Malcolm Pirnie
7 tried to investigate the abandoned sewer. I believe
8 it was the sewer that was in service before the
9 LaSalle was put in and Frontier Avenue was relocated.
10 Now, I don't think they were able to find it. I
11 will make sure that we investigate that further as
12 part of the remedial work in the sewers.

13 MS. IADIACCO: I was curious because I
14 know, I notice that there was nothing in that docu-
15 ment that indicated there was nothing on Buffalo
16 Avenue. It just went down as far as Frontier. I
17 didn't see any on Buffalo Avenue and I was just
18 curious about that and I feel that findings about
19 the sewers and the creeks is pretty much the same
20 manner that we have been informed about things of
21 the disposal of the drums and the fact that the
22 National Academy of Sciences does not want to do
23 the peer review. We are usually told about things

1 at meetings where we haven't had any time to prepare
2 for them and that is what happened here today and
3 I just noticed in your---I am trying to hurry so I
4 am probably not making a whole lot of sense, in your
5 fifth draft work papers, I noticed on the first
6 couple of pages and I haven't had a chance to go
7 over it, that a couple of really important things
8 were left out. I know the one thing, the one
9 paragraph where it mentioned holding somebody clear-
10 ly accountable, that was left out in the fifth
11 draft which was mentioned in the fourth draft and
12 then about having a 95 percent confidence in what
13 you decided was left out in the fifth draft and it
14 was mentioned in the fourth draft and that is only
15 going up to the third page.

16 CHAIRMAN WELTY: Page 4 has the clearly
17 accountable portion. That was put there primarily
18 because it seemed to fit in more with the treatment
19 plant and the remediation. So, it's on page 4.

20 What was your other point, Violet?

21 MS. IADIACCO: The 95 percent confidence.
22 See, I'm trying to pay attention to what you are
23 saying here and I haven't had a chance to go over it.

CHAIRMAN WELTY: The specific reference to

1 the 95 percent confidence limit was left out of the
2 first discussion of it but it is included throughout
3 the rest of the document. It was left out at the
4 suggestion of one of the consultants, I'm not sure
5 which one.

6 MS. IADIACCO: Okay. I will save the
7 others for this afternoon.

8 MS. GABALSKI: Rev. Dyer.

9 REV. DYER: Someone mentioned a few
10 minutes ago about the benefit of someone's wisdom.
11 I have a fear that---in the pit of my stomach that
12 we have the benefit of someone's prejudice because
13 I increasingly feel that push that I felt yesterday
14 when EPA made that statement that they are pushing
15 toward habitability rather than safety, and that
16 concerns me. This is why I think that the push to
17 go ahead and let's do something or that, get the
18 creeks and the sewers taken care of, it's a prejudice
19 and pushing in that direction rather than it is to
20 really look at the whole thing and in a safety kind
21 of an area because that 93rd Street area, that is
22 right across from where my property is and, you know,
23 I have got a dump on one side and then this on the
other side and I am right in the dumps and I am

1 asking people to clean up their lives spiritually.
2 and in the middle of a dump, and something else that
3 concerned me was that when I went through the treat-
4 ment facility, that they indicated that it was only
5 operating occasionally and that it wasn't operated--
6 if it was left too long a time, that the things
7 that were laying there would get ripe and I wondered
8 how ripe all of this is getting over the years
9 underneath Love Canal, where with six months there
10 has been leachate out and, you know, because I am
11 sitting relatively close to that.

12 On the area of where the neighborhoods are,
13 I am setting in number eleven and the question I
14 have is, I asked yesterday about, will someone test
15 my building? Will someone test my---a third of the
16 whole area, I own it, and three-quarters of the
17 area there is really habitable, is part of my---
18 especially along where the fence is, we own it and
19 if they will not even come and test us, then that
20 concerns me and also will they test a home that
21 someone is living in? Until yesterday, unless
22 Dr. Huffaker said, if you are living there, it can
23 prejudice what is being done because of things that
are there. There is only one home that is setting

1 on that fence that would be eligible to even be
2 tested and that is---there is one that is there,
3 someone is living in, and then there is one that is
4 vacant besides mine, and I own the rest of the
5 property. So, they are not testing mine, they are
6 not testing the others, then we have one house
7 along that fence that is very close. We have got
8 the LaSalle community center. Will you be testing
9 that?

10 DR. FOWLKES: I have the same question.
11 I'm glad you raised it because the whole endeavor
12 has been directed toward residential habitability
13 and we don't really even have any mandate to speak
14 outside the issue of houses that it could be, or
15 dwellings, I suppose is a better way of putting it
16 and I have the same question about what happens to
17 other types of structures.

18 CHAIRMAN WELTY: Could we discuss that
19 after lunch then, since he raised the question?

20 DR. FOWLKES: Yes, but by the system that
21 we propose, your individual house would be tested.
22 I can't speak to the rest of the property.
23 Individual dwellings, you know---

REV. DYER: Of course, they are saying---

1 they haven't tested them and they won't test it
2 because it's a commercial piece of property.

3 DR. FOWLKES: Well, your house is not a
4 commercial piece of property.

5 REV. DYER: It is owned by the church.
6 That is why they haven't bought us out. It is a
7 commercial piece of property.

8 DR. FOWLKES: I see.

9 CHAIRMAN WELTY: Are there any other ques-
10 tions that you wanted us to consider?

11 MR. LAVERDI: Yes. I would just like to
12 ask Dr. Miller and Dr. Fowlkes a question pertaining
13 to this here report of the Love Canal Construction
14 of the Disaster. Were you paid for this here,
15 Dr. Miller and Dr. Fowlkes, this particular report?

16 DR. FOWLKES: No, we were not paid.

17 MR. LAVERDI: This was contracted to you?

18 DR. MILLER: We spent about \$3000 out of
19 our own pocket for research.

20 MR. LAVERDI: Okay.

21 DR. FOWLKES: And we also took our vacation
22 time to do it and FEMA funded it. FEMA was the
23 granting agency. We initiated the contact of FEMA.
FEMA did not come to us. At the time, frankly, we

1 didn't even know that FEMA had a role at Love Canal
2 because FEMA is a national agency that funds
3 research of disasters of one sort or another. It
4 paid us a rather small amount of money which
5 covered our expenses---not quite, our travel
6 expenses, our living expenses and our transcribing
7 expenses and there was absolutely no money earned
8 or money paid but that is how---

9 MR. LAVERDI: But you were directly
10 involved in working with the ecumenical task force
11 and the Home Owners Association pertaining to this
12 report.

13 DR. FOWLKES: No.

14 MR. LAVERDI: Well, it states right here
15 in the report that you want to thank the ecumenical
16 task force and the Home Owners Association.

17 DR. FOWLKES: We used their news clipping
18 service. That is what we did. They have a very
19 good newspaper.

20 MR. LAVERDI: I just wanted to ask you,
21 did FEMA give you any information as to---

22 DR. MILLER: We got one lunch.

23 MR. LAVERDI: Would you let me ask the
question? I have been listening to you.

1 DR. MILLER: My soul isn't for sale for
lunch.

2 MR. LAVERDI: Okay. So, in other words,
3 you just got a small amount of money paid to you?

4 DR. MILLER: I got one lunch.

5 MR. LAVERDI: But, you referred to the
6 ecumenical task force and you refer to the Home
7 Owners Association in your report. Were you aware
8 of any other groups in the area at the time?

9 DR. FOWLKES: We met with Mr. Morris.

10 MR. LAVERDI: Just a moment. I didn't ask
11 you that question. I just want two questions
12 answered. You worked with the Home Owners Associa-
13 tion.

14 DR. FOWLKES: No.

15 MR. LAVERDI: Well, you thanked the Home
16 Owners Association and the ecumenical task force
17 for helping them and, you know, the leads you got
18 pertaining to this report. I just want to ask you,
19 did you know of any other groups in the area?

20 DR. FOWLKES: Yes.

21 MR. LAVERDI: You did.

22 DR. FOWLKES: Yes.

23 MR. LAVERDI: Did you know there were

1 concerned area residents that have other pertinent
and relevant information?

2 CHAIRMAN WELTY: Nunzio, what is your point?

3 MR. LAVERDI: My point is this, that I have
4 reason to doubt the credibility of Dr. Fowlkes and
5 Dr. Miller as to being on this panel. Now, when
6 this panel was more or less made up, it was specific-
7 ally stated at the technical review committee that
8 anyone that had anything to do with the Love Canal
9 pertaining to other groups and anyone, any contracts
10 or anything with FEMA or any government agency,
11 they would automatically be excluded.

12 CHAIRMAN WELTY: That is not true. When
13 we set this up, it was basically anyone who
14 participated in the previous decision related to
15 habitability would not be utilized in this process.

16 MR. LAVERDI: We never had any panel.

17 CHAIRMAN WELTY: Yes, we did.

18 MR. LAVERDI: Before this panel as far as
19 habitability.

20 CHAIRMAN WELTY: There was a panel that met
21 to discuss this same issue. It met in Atlanta.
22 It did not meet here and one of the reasons that we
23 have been convening the group here is so that we

could have---

1 MR. LAVERDI: Well, I am quite upset over
2 this because, for this particular reason, this is
3 completely meaningless and a complete bias, one-
4 sided story of the Love Canal issue. Pertinent
5 information that could have been gotten, all they
6 had to do was walk a block away---excuse me, I
7 listened to you, you can listen.

8 DR. FOWLKES: We have been listening more
9 to you than you have been listening to us.

10 MR. LAVERDI: I have been here for four
11 hours, Doctor, and I haven't said two words. You
12 have just been talking all day.

13 DR. DAVIS: Mr. Laverdi, do you have some
14 specific facts?

15 MR. LAVERDI: Yes, specific facts, right,
16 that other people who had pertinent information
17 regarding this Love Canal---

18 DR. DAVIS: What information?

19 MR. LAVERDI: Information such as the
20 history. This to me is the history of the Love
21 Canal, okay. Now, there was pertinent information
22 and as a community leader, you didn't give me an
23 opportunity to respond.

DR. FOWLKES: We did not interview
1 community leaders for this study. We purposefully
2 did not interview.

MR. LAVERDI: You interviewed home owners,
3 am I correct?
4

DR. FOWLKES: That is correct.
5

MR. LAVERDI: Okay and you interviewed---
6 you must have had some kind of an interview with
7 the ecumenical task force.
8

DR. FOWLKES: No. We thanked them for the
9 use of their newspaper clipping library.
10

MR. LAVERDI: In other words, the ecumenical
11 task force took you wherever they took you, showed
12 you all the newspaper clippings of how they took
13 leave of the Love Canal and---
14

CHAIRMAN WELTY: Mr. Laverdi, do you have
15 any comments pertinent to this area?
16

MR. LAVERDI: I thought that any comments
17 that would be made would be made pertinent to the
18 Love Canal and specifically, anytime that we came
19 here, anything that was pertinent to the Love Canal
20 and I think that this makes it very pertinent and
21 important information and one of them is, they
22 point out that the government buried materials there
23

1 too but they did not specifically state for this
2 particular report that there was also a witness by
3 the name of Frank Venchi. All they had to do was
4 just read a little further. He testified at a
5 congressional hearing of army burials and described
6 them as zinc barrels and he being supervised by
7 the United States Army during that term. That is
8 number one.

9 Number two, it was charged by myself and
10 I think it's very important and I think that you
11 panel of scientists and a bunch of lawyers could sit
12 here and would agree with me, that I as a leader
13 of concerned area residents and president of the
14 concerned area residents, I charge criminal negli-
15 gence and damages on the health, education and
16 welfare of every child that went to that school and
17 proceeded to go and get a warrant for the particular
18 people's arrest because I led a committee, you
19 understand, in 1969 to have that school investigated
20 and it was found that there were chemicals that
21 were adjacent to that school. That was never
22 brought out. I think it's important for the
23 history of this community since this is here, for
them to know that.

Now, if they would have went further on,
1 I could go on and on with this, on and on, and I
2 think that it was specifically and purposefully
3 deleted because all of these other people were
4 trying to blame faults, understand, and they talked
5 about panic. I agree with this stuff. That is what
6 happened in the Love Canal. It's panic and because
7 of the panic, the thing that was used by different
8 groups and there has been an awful lot of unfairness
9 and I think, I feel that this is a rigging. We are
10 talking about rigging. We had a doctor at the
11 meeting that we had here recently and he stated that
12 the government is rigging certain individuals being
13 on a particular committee.

14 Well, to me, I talked to Dr. Miller. I
15 talked to Dr. Fowlkes, and I want to be perfectly
16 honest, they came to Love Canal and the first thing
17 Dr. Miller said was, "I am damned mad. Who the hell
18 wants to talk about the mayor?" That is number one.

19 I think this has got nothing to do with the
20 Love Canal. This shows me a complete prejudice
21 here. I am looking for an unbiased opinion of a
22 panel of scientists of every kind here and all we
23 are getting is people that are continuously biased,

1 that don't believe in the area, that believes that
everybody should get out of this area.

2 CHAIRMAN WELTY: Nunzio---

3 MR. LAVERDI: And let me point out another
4 thing: The people that moved from Love Canal, a
5 quarter of them live right next to that new NUCO
6 dump now. They bought a home right next to that
7 NUCO dump. I think that is pertinent and I think
8 that this is relevant and I think that what we left
9 out of here, you understand, as far as this history
10 is concerned, more or less, understand is just---
11 it just astounds me that all they had to do was
12 walk one block and we could have shown you some more
13 clippings, okay.

14 DR. DAVIS: Nunzio, what would you have
15 us do differently with respect to the question of
16 habitability of Love Canal right now based on what
17 you are saying?

18 MR. LAVERDI: Well, we are certainly not
19 going to get an unbiased opinion if you read this
20 report.

21 DR. DAVIS: Can you address the issue?
22 We are trying to write a document today on advising
23 people as to the habitability of Love Canal. You

1 are raising some points there. They are interesting
2 but what is their relevancy to our decision today?

3 For example---

4 MR. LAVERDI: Well, Dr. Miller and Dr.
5 Fowlkes relate this here to this map. Because they
6 came into the area and discussed it with these
7 individuals and that is how they come to the conclu-
8 sion.

9 DR. FOWLKES: No. We met with you for hours
10 on that.

11 MR. LAVERDI: Hours, what hours? What
12 hours? What hours? We met. Look it---we met
13 for about an hour and a half and then I will tell
14 you something, one day we argued over here because
15 the DEC didn't give you proper advance notice,
16 understand, because they were going to bury these
17 barrels. Now, don't you think it's important that
18 you would have gave us, myself, I am a leader and a
19 pusher and a fighter for the environment, an oppor-
20 tunity? I had no knowledge of your writing this
21 report. If I had knowledge, I would have made a
22 stink a long time ago.

23 DR. DAVIS: Excuse me. That report has
really not influenced what we have done here.

1 MR. LAVERDI: Yes, this here report,
2 referring to this, this report, they refer this to
3 some of the leaders of the community and other
4 individuals of the community that they discussed
5 this with.

6 DR. DAVIS: You disagree with the way the
7 Love Canal was divided into neighborhoods?

8 MR. LAVERDI: Absolutely. I think it is
9 completely biased. I think it is completely biased.
10 If I see house A---

11 DR. MILLER: Biased towards what?
12 Biased towards what? If you are going to call me a
13 crook, I want to know what I am doing.

14 MR. LAVERDI: Dr. Miller, do you smoke?

15 DR. MILLER: Yes.

16 MR. LAVERDI: Do you smoke? Why?

17 DR. MILLER: Bias towards what?

18 MR. LAVERDI: Bias towards the risk factor.
19 In other words---

20 DR. MILLER: That doesn't even make sense.

21 MR. LAVERDI: Yes, it does. If A could
22 be---

23 CHAIRMAN WELTY: Nunzio, I'm going to take
the chairman's prerogative and break for lunch. I

1 don't think we are gaining anything in this discus-
2 sion.

3 MR. LAVERDI: To tell you the truth, I
4 don't think we are gaining anything here at all
5 with Dr. Miller and Dr. Fowlkes here.

6 DR. WELTY: We have heard your opinion and
7 we will take that into consideration. Thank you.

8 (Whereupon, the above proceedings were
9 adjourned for lunch.)
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PROCEEDINGS AFTER LUNCHEON RECESS:

1
2 CHAIRMAN WELTY: All right. I have been
3 asked to introduce this. This is Vince Pitruzzello
4 from the EPA and he will be telling us about the
5 dioxin sampling plan and we might as well discuss
6 peer review at this time also.

7 MR. PITRUZZELLO: As I said, in preparation,
8 it looks like dioxin is obviously going to be one
9 of the criteria. So, when this became apparent
10 about the beginning of October, I guess it was,
11 we asked NUS, which is a consultant to the EPA that
12 has had a lot of dioxin experience, we asked them
13 to put together a sampling program for the EDA.

14 The document, the first draft, this is just
15 the first cut they put together, was sent out
16 October 26th and I believe the panel has gotten
17 their copies.

18 We have not even, "we" being the TRC,
19 Technical Review Committee, has not even discussed
20 this yet. We will probably be doing this at the
21 next meeting which we hope to have sometime in late
22 November and at that time we will revise, review
23 and modify, whatever it may be, but we would like to

1 get any comments that you might have. Dr. Stoline
2 and Dr. Sipes have seen it already and I don't know
3 if they are willing to supply any comments.

4 CHAIRMAN WELTY: Dr. Stoline has already
5 written a memo on it.

6 DR. STOLINE: Yes. I have written a memo
7 on that.

8 MR. PITRUZZELLO: Okay and we would like
9 to get any other comments from the panel.

10 CHAIRMAN WELTY: You will all have an
11 opportunity to comment on the revision as well. If
12 you want to wait until the revision comes out, that
13 would be fine.

14 MR. PITRUZZELLO: Okay. That really is
15 the essence of it. I just wanted you to know that
16 the sample plan has been sent around and we are
17 looking for your comments on it and we will be
18 discussing it at the next TRC meeting which
19 tentatively we are going to try to schedule for
20 November 28th.

21 CHAIRMAN WELTY: Now for the peer review.

22 MR. PITRUZZELLO: All right. On the peer
23 review, I think we all know by now that we were
going to have the National Academy of Sciences do

1 the peer review. That has sort of fallen through
2 so what we have done is come up with some different
3 options. We discussed these options with the public
4 at a meeting last Thursday and what we did was, we
5 went up there looking for any kind of option, any
6 kind of options they may have come up with. We
7 came up with a few of our own and basically what I
8 have got here is a mix and match of the eight or
9 nine different options that were presented. If you
10 want, I could run through them real quickly and
11 then what we will try to do is at the next Technical
12 Review Committee, we will go through these things
13 one more time and get public input and then come
14 up with a final option, assuming we can put together
15 a peer review panel as soon as possible.

16 Tom, if you want me to take the time, I
17 can go through the options we ran through.

18 CHAIRMAN WELTY: Please.

19 MR. PITRUZZELLO: One thing the National
20 Academy of Sciences, to my knowledge, is not
21 totally out of the picture yet. We had sent them
22 another letter requesting that they reconsider their
23 position and it is my understanding that they haven't
responded to it yet but they will be responding.

1 I don't know if that is positive or negative but
2 it's not totally closed yet.

3 Aside from that, some of the other ideas
4 we came up with, there is no priority to the order,
5 we were just talking with the community one night
6 and we had some ideas and they had some ideas, to
7 utilize the National Bureau of Standards to conduct
8 the peer review. Some of the obvious advantages are
9 NBS is, to my knowledge, is very good on the QC
10 methodology side, for example, statistics, et cetera.
11 I don't know how good or how well they would relate
12 to the scientific side of this. That is something
13 we have to explore; the science being the habitability
14 type science.

15 Someone came up with a suggestion of employ-
16 ing the American Association of Retired People which
17 is a group, I believe, of also scientists and
18 engineers which is something we are going to pursue
19 as an option.

20 Have some of the residents of the EDA,
21 present residents on the peer review panel. That
22 is one of the options and the obvious advantage to
23 that is on credibility. The obvious disadvantage is
that at least I feel the public that lives there now

1 does not have the scientific expertise to review
2 these.

3 Try to get the Institute of Medicine,
4 National Institute of Health, who we would be
5 trying to pursue to see if these organizations are
6 interested;

7 Another option that came up was to have
8 this panel here review, peer review the CDC DOH
9 consensus of your opinions. That is something you
10 might want to consider or think it out. I don't
11 know if you like the idea or not at all but it is
12 another idea that came up.

13 Have the habitability criteria published
14 in the Federal Register and invite any and all
15 comments on it. That could be a process that could
16 go on until 1999.

17 DR. POHLAND: Is there a list going around
18 for resignations?

19 MR. PITRUZZELLO: We could advertise once
20 again in the Commerce Business Daily, which we did
21 once before, which we didn't get any response to it
22 and we are thinking of just opening it up again.
23 That involves a longer process again, the procurement
process which could take a few months.

Another suggestion was to establish a
1 panel with candidates selected by both the govern-
2 ment and the public, much like this panel here,
3 where the public had an input to have a couple of
4 members on. I personally like that idea. We'll
5 have to see just as to the procurement business
6 through headquarters, if there are any problems of
7 getting a panel like that put together again and
8 then go directly to a couple of other organizations
9 such as the New York State Academy of Sciences,
10 any academic institutions, somebody mentioned the
11 Office of Technology Assessment. They obviously
12 may present some conflict of interest with their
13 past reviews.

14 The next to last one we came up with was
15 provide a formal comment period for any and all to
16 respond to the summary, so that any comments may
17 contain any questions on the consensus and different
18 opinions. The TRC would have to respond to that,
19 and the final one that was brought up was to totally
20 eliminate the peer review, which I don't think---
21 I didn't believe the EPA or the TRC wanted to do,
22 but that was just an option, just to not have a peer
23 review. That is where we stand right now. We will

1 be discussing these, as I said, in more detail in
2 the meeting on the 28th. That is still tentative
3 and hopefully we will have some kind of a peer
4 review option selected.

5 CHAIRMAN WELTY: All right. Do any of the
6 consultants have any other suggestions for peer
7 review?

8 DR. WINKELSTEIN: It might be inappropriate
9 for the consultants to recommend as to that.

10 MR. PITRUZZELLO: And I would assume it
11 would be inappropriate for the consultants to peer
12 review their own report.

13 DR. WINKELSTEIN: Definitely inappropriate
14 for the consultants to review their own work.

15 DR. WIESNER: I suppose some consideration
16 ought to be to asking the WHO to establish a
17 committee, the World Health Organization, or the
18 American Health Organization.

19 CHAIRMAN WELTY: Can you add that to your
20 list?

21 MR. PITRUZZELLO: I hadn't thought of that
22 one.

23 CHAIRMAN WELTY: Thank you. Did you have
anything else to mention from EPA's perspective?

1 MR. PITRUZZELLO: One other thing. I was
2 able to get in touch with our people in New York
3 who were able to get in touch with Chris Daggett
4 this morning and with respect to the article in
5 the paper, they asked me to read a quote from
6 Chris and Jim Marshall and I would just give it to
7 you verbatim: "EPA has not and will not prejudge
8 the outcome of the habitability study and what was
9 said yesterday was that the study was essential to
10 assure residents whether or not the neighborhood was
11 habitable."

12 They just asked me to provide that state-
13 ment. They also said that if there is anyone that
14 would like to speak with them, we could try to
15 make arrangements this afternoon. They are in
16 Buffalo. We could try to get anybody on the panel,
17 for example, or the public may be interested and
18 they could make the hook-up. So, with that in
19 mind, it's open if there is anybody that wants to
20 get in touch with them and make arrangements.

21 CHAIRMAN WELTY: Thank you.

22 DR. FOWLKES: Did the National Academy
23 offer any reasons why it wouldn't?

MR. PITRUZZELLO: Yes. -- I can give you the

letter. I have it.

1 CHAIRMAN WELTY: Rev. Dyer raised a ques-
2 tion, should we test churches and business establish-
3 ments as part of the criteria. Dr. Huffaker and I
4 spoke during the lunch hour and we don't think that
5 that would present any particular problems. Do you,
6 as consultants, feel that that would be appropriate
7 to include churches and business establishments?

8 DR. POHLAND: Certainly it is a position
9 of contact or potential contact.

10 CHAIRMAN WELTY: Okay. We can include that
11 then in the next draft.

12 The question now comes up as to whether or
13 not we need to have another meeting and I would open
14 that to you as the consultants. The plan, as I
15 outlined it, still seems viable to me, that we can
16 revise this draft number five and incorporate the
17 appendices, send it out to you and ask for your
18 written comments. Would that process be sufficient
19 or do you feel we need to reconvene to discuss
20 draft six prior to the final draft?

21 DR. POHLAND: I would like to propose that
22 we take a look at what you produce and then make a
23 decision at that time as to whether or not the whole

1 panel or maybe parts of the panel have to get
2 together. Perhaps what we could do right now is just
3 kind of, in anticipation of the possibility of need-
4 ing another meeting, set some possible dates for it.

5 DR. WINKELSTEIN: We also need to provide
6 some mechanism by which the public can respond to
7 the final draft if we don't have a meeting. So
8 that you would have to make it available not only
9 to the committee but also to the public through some
10 mechanism.

11 DR. VANDERMEER: In our ongoing dialogue
12 with the community, we have agreed that when the
13 habitability criteria are prepared and in final
14 draft, we will make them available to the community,
15 give them adequate time to review them and give us
16 either written or oral comments and we will respond
17 to any and all of their comments through that
18 process and I would not like to foreclose the oppor-
19 tunity for any individual scientist or the panel to
20 have an opportunity to respond as well as the repre-
21 sentatives of government.

22 DR. STOLINE: My feeling is that we are
23 going to need at least one more meeting as a panel
but I would only recommend having that meeting after

1 we have decided to the best of our ability today
2 what additional appendices we need and at the time
3 they have been written and the drafts have been
4 sent around and we have had time to critique those
5 and so on, but I do think that that is a part of
6 our report and I do think that in many respects it
7 is every bit as important as what we have been
8 talking about up to now and since we have none of
9 that detail in front of us and since I think it is--
10 I think we do learn things when we are together
11 that you don't learn when you are alone, I would
12 suggest that we have one more meeting for that
13 purpose but only after we have all the supporting
14 documentation prepared so it may be a little while.

15 While we are speaking of that, there is one
16 appendix that I would suggest that we add and that
17 is with respect to what Vince was talking about
18 and that is the EPA dioxin sampling. I don't think
19 that was mentioned as an appendix but if possible,
20 I mean, that is such a crucial aspect of what we
21 are actually suggesting be done as far as making
22 decisions and I think that should be an appendix.

23 CHAIRMAN WELTY: How do the other consul-
tants feel about that?

DR. SIPES: Adding this as an appendix?

DR. STOLINE: Or whatever.

DR. WINKELSTEIN: Unless you are going to include it in appendix 8.

DR. STOLINE: I would agree to have it as a separate appendix.

DR. WINKELSTEIN: Fine. That would be easier to have it as a separate appendix.

DR. STOLINE: Appendix 8 was listed as a part of the documentation for the sampling plan possibly for non-dioxin.

CHAIRMAN WELTY: I guess that gets back to the question as to how involved do you want it to be in terms of following through on all of your recommendations.

DR. POHLAND: Would it suffice to just reference it in our listing of reference material?

DR. STOLINE: That would be fine, whatever, so we have something.

DR. POHLAND: If we start adding large documents to the appendices, we are going to defeat the purpose of the document.

DR. STOLINE: Whatever. It is just something that we looked at and agreed and passed

approval on, something--

1 DR. POHLAND: It is part of the criteria
2 so it should be in some way referenced or included
3 by reference.

4 DR. STOLINE: We were talking about this
5 this morning to tie down as many of the loose ends
6 as possible.

7 DR. HUFFAKER: Regarding the distribution
8 and mailing of the draft document and so on, the
9 mailing list includes FEMA's office and quite a
10 large group, almost everything you get goes to all
11 of these people. The only exceptions have been,
12 Fred, for example, wants some very technical
13 material that was very specific and that did not
14 go out to everyone but it was included, the title
15 and the contents of it in the cover letter.

16 DR. POHLAND: Even there I think that my
17 intent is to have materials in a summary form
18 abstracted from those kinds of documents to fulfill
19 the need of appendix 4.

20 DR. HUFFAKER: Well, how do we handle
21 these appendices, because obviously they fall out
22 into various areas of expertise and I can see you
23 participated very much in number 4, perhaps

1 epidemiologists in another one and Devra on the one
2 on health assessments and so on.

3 DR. POHLAND: Well, I think in the case of
4 particularly, we have asked for some rather
5 definite feedback from the state which I don't mind
6 receiving and putting together with some other
7 things for consideration as an appendix for review
8 by the group. I would hope these appendices wouldn't
9 get so cumbersome that nobody would read them.

10 MR. SLACK: Is it clear who is doing the
11 appendices?

12 CHAIRMAN WELTY: Not yet.

13 MR. SLACK: Who is responsible?

14 DR. POHLAND: We are getting to that point.
15 It's being suggested.

16 CHAIRMAN WELTY: We have asked CH₂M Hill
17 to prepare a draft of the appendices that we might
18 start from. So, they have copies of most of the
19 transcripts that have been produced from these
20 meetings. So, that contains a lot of the informa-
21 tion, plus they have copies of all the documents
22 received on some of the appendices. For instance,
23 number 4, I think we would need your help, Joe, or
the help of the DEC.

1 MR. SLACK: If Fred would be agreeable,
2 we would be glad to assess the remedial action
3 form, at least take a first cut at it.

4 DR. POHLAND: That is what I would really
5 like to see. I think that it would be a proactive
6 way of approaching this.

7 CHAIRMAN WELTY: So, can we count on the
8 DEC to write a draft of appendix 4?

9 MR. SLACK: If I could only ask if you
10 could tell me the sorts of things you want to see
11 in there. I don't mean to dodge the issue but just
12 a table of contents?

13 DR. POHLAND: They are all a matter of my
14 frequent correspondence which was referred to
15 earlier. It is all on record and I have reiterated
16 it with Bob the last go around. I put them right
17 in a list to you and I think my correspondence
18 responsive to the last draft has it in it. I think
19 I have made it a matter of record orally here and
20 I think it requires a collaborative effort between
21 you and Nick, for instance, to incorporate the
22 elements that he is responsible for with the ones
23 that you are responsible for. I think---has it
been established that CH₂M Hill is going to put

these things together?

1 CHAIRMAN WELTY: Yes. Well, if the DEC is
2 going to do appendix 4, that will be a big help and
3 the others, I think CH₂M Hill can handle most of
4 the others.

5 One of the big ones that needs further
6 discussion is appendix 9 and---

7 MR. HOFFMAN: Tom, there is one other
8 issue and that is, a piece of appendix 4, but it's
9 not clearly defined at that point in time and that
10 is, we are talking about this method by which you
11 evaluate the effectiveness of the remedial action.
12 We are going to be collecting a lot of data. How
13 are we going to evaluate that data and make the
14 determination whether or not the remedial action is
15 in fact working? That is a real---

16 DR. POHLAND: That's the implementation
17 stage. However, I would submit that people knowledge-
18 able on the abilities of different treatment
19 processes, for instance, with regard to the type of
20 waste that is being dealt with, can make those
21 judgments.

22 MR. HOFFMAN: I think the treatment plant
23 operation is very straightforward.

1 DR. POHLAND: Likewise, I think we heard
2 something about what may be the monitoring means
3 now and what maybe it will mean in the future.

4 MR. HOFFMAN: Our discussions with E. C.
5 Jordan have indicated that they are looking back
6 towards this group to help define contaminants of
7 concern and the way by which you would evaluate
8 those and to determine whether or not the remedial
9 action is working.

10 DR. POHLAND: What is E. C. Jordan's
11 role in this project?

12 MR. HOFFMAN: They are a consultant to the
13 DEC in this monitoring program.

14 DR. POHLAND: But they must have some
15 notion of what they are going to do with the data
16 that they are designing for.

17 MR. HOFFMAN: The typical way that that
18 kind of data is handled is the person sits down and
19 looks at it and tries to figure out whether it
20 makes some sense or not and now, that is pretty
21 hard to put into a criteria document, and achieve
22 any credibility.

23 DR. POHLAND: I don't think we should
presume to be able to anticipate what kind of data

1 is going to come forth and what it might mean. I
2 really feel that what is done with these data in
3 regard to addressing the efficacy of the whole
4 remedial action will of necessity have to be
5 determined at the time it comes forth, but there
6 are obviously routine ways that one goes about
7 certainly determining whether you have more or less
8 of a problem and I don't think we have to specifically
9 describe in this appendix just how these data
10 are going to be analyzed except to the extent that
11 we want to be able to use them to demonstrate that,
12 in fact, the remedial action is productive remedial
13 action.

14 Certainly E. C. Jordan must have some
15 notion about, in their design of their plan, they
16 have got to have some notion of what kind of data
17 they want and why, what they are going to do with
18 that and so forth. I think the guidance is being
19 given, is certainly in terms of those organics, I
20 guess, and maybe inorganics, that should be maybe
21 part of this process. I don't think we can go much
22 beyond that as far as our situation.

23 MR. HOFFMAN: It's clear, your sense on
how far the appendix needs to go at this point in

time.

1 CHAIRMAN WELTY: Mike, did you have a
2 question?

3 DR. STOLINE: No.

4 CHAIRMAN WELTY: Well, let's move along
5 to appendix 9, statistical techniques used to
6 implement the criteria. Mike, you had some concerns
7 in that regard and I think Pat and Martha also
8 raised some concerns in their comments related to
9 statistical concerns.

10 DR. STOLINE: Yes. I have essentially
11 written a memo suggesting that consideration be
12 given to drafting a sampling plan for implementing
13 the decision process for use for the non-dioxin
14 Love Canal marker chemicals and in the memo I
15 describe a couple of things that are, I think,
16 really things that one should look at in drafting
17 such a sampling plan.

18 One is the unusual type of data that one
19 might be getting and in particular, if one can
20 anticipate that there will be the vast amount of
21 nondetect data that was essentially---well, that
22 characterized the EPA data that was collected between
23 1980 and 1982, that the question is, how does one

1 analyze this using possibly some techniques that
2 have been developed in other areas, statistical
3 techniques that have been developed for other kinds
4 of applications. Can they be modified for use in
5 this particular problem or should they?

6 I must confess that even though I am a
7 statistician I do not have expertise in this
8 particular area of statistics but I found I was just
9 challenged enough to try to write a memo to try to
10 write down what I thought the pertinent points were
11 on the questions that I had.

12 I would suggest that Tom or someone from
13 our committee ask the EPA or for some assistance in
14 drafting something along the line of a sampling plan
15 specifically addressing some of the issues that were
16 raised in this memo and have it be kind of a
17 companion to the dioxin plan that is already under
18 development and bring it back to this group and we
19 can take a look at it because so far we talked about
20 just the median levels but given that there is a
21 vast amount of that data that is going to be non-
22 detect data, the question is, can one really use the
23 techniques that we have talked about and I really
have reservations about that. I think we really

1 should explore finding the most optimal statistical
2 techniques for answering the kinds of questions that
3 we want to answer in making these kinds of decisions,
4 given the nature of the data that will be collected
5 and someone is going to have to analyze.

6 I have questions at this point that I
7 don't know, quite frankly, what the recommended
8 technique will be and I think we really---this panel
9 would be well served to have some expert assistance
10 in trying to explore some of these questions.

11 CHAIRMAN WELTY: I think probably the way
12 to go on this one, this is probably the toughest of
13 all the appendices as far as I can tell---

14 DR. POHLAND: I would say that it is right
15 in there.

16 DR. DAVIS: Dr. Stoline, I want to say I
17 was very impressed with the memo you wrote on the
18 subject and I read one or two of the things that
19 you referred to and I concur, it's real important
20 and a very complicated issue and one that could
21 completely determine the results by what technique
22 you picked and what assumptions you made about the
23 distribution of the curve that obtains and I think
that it is a tricky issue and you obviously have

some sensitivity down to it at CDC.

1 CHAIRMAN WELTY: I would propose that we
2 bring this issue up at the TRC meeting and discuss
3 among the four agencies on that group as to how we
4 might approach this and then obtain the necessary
5 expertise to address the question and submit to you
6 all for your review the methodology we feel that
7 might be most appropriate.

8 DR. DAVIS: I think we might want not to
9 have Dr. Stoline and perhaps a consultant or two
10 to this group, so to speak, Dr. Stoline is, after all,
11 one person and obviously understands the issues but
12 it might be worth considering that. On the other
13 hand, you at CDC, and there are people at EPA who
14 are experts in some of these questions as well and
15 you might be able to generate the necessary material
16 internally without going outside.

17 CHAIRMAN WELTY: We will certainly welcome
18 your input as we have always.

19 DR. STOLINE: I am willing to help with
20 whatever I can do.

21 CHAIRMAN WELTY: We will see what we can
22 work out, the best way to handle this particular
23 appendix and then get back to you and let you know

how we plan to proceed.

1 DR. VANDERMEER: At the TRC meeting on the
2 28th of November next, we will ask that be put on
3 the agenda. I think now most of us agree that we
4 need an organic sampling scheme also and that that
5 should be incorporated in one document.

6 DR. STOLINE: Fine.

7 DR. HUFFAKER: And we need the statistical
8 background to tell us what we are going to do and
9 the TRC is going to have to develop the final
10 sampling protocol.

11 CHAIRMAN WELTY: That is satisfactory to
12 you?

13 DR. MILLER: I think you have certainly
14 spoken to the spirit of that. I don't think I have
15 seen that.

16 CHAIRMAN WELTY: I have.

17 DR. MILLER: These are the concerns about
18 constraining the outcome.

19 CHAIRMAN WELTY: Right, fine. We are down
20 then to item 7 on the agenda, update on selection of
21 control neighborhoods and Devra Davis had some
22 concerns to submit and she submitted a statement
23 that might be incorporated into the draft.

1 DR. DAVIS: Much of that, I basically
2 revised something Warren Winkelstein had already
3 done on that subject.

4 CHAIRMAN WELTY: But it should be included.

5 DR. DAVIS: It should be included at every
6 place where it talks about the control population
7 and not just at that one point but as you go through
8 the document and I think Jim and Tom, whoever is
9 going to be drafting this, just you will see wherever
10 it refers to the control population, it should have
11 a very clear reference to the characteristics of
12 it that are specified in that insert that was
13 drafted.

14 DR. HUFFAKER: Well, as part of the report
15 of where we are, the stenographers are working on
16 the Love Canal data itself and that will come out
17 rather neatly. It's all on the tape and it's just
18 a matter of asking for it and they are starting to
19 ask for matches in the frontier here with these
20 houses by the criteria that you describe. When we
21 did neighborhoods that look interesting, we would
22 sit down and look at our data on landfills, old,
23 known, unknown, and so forth, or inactive and active
and so on and then throw out the neighborhood we

1 have just started to survey. This is a difficult
2 procedure to find something not within a half a
3 mile of, say, a landfill in this part of the world.

4 DR. DAVIS: That is why I wanted to change
5 my recommendation from what you have in front of you.
6 I don't think it has to be, nor should it be, in
7 Western New York.

8 DR. HUFFAKER: It may not be.

9 DR. DAVSI: Okay. So, as it reads now,
10 what I wrote says "Comparable in Western New York"
11 and I don't think it should say that. I think it
12 should say "comparable population," and it may end
13 up having to be even another state, although I
14 realize that would pose some problems.

15 CHAIRMAN WELTY: So, you are suggesting to
16 just strike "in Western New York"?

17 DR. DAVIS: Yes.

18 DR. MILLER: I guess I would also, Devra,
19 be more comfortable if we had a working definition
20 of what "not adjacent" means.

21 DR. DAVIS: Yes.

22 DR. WIESNER: What about a word that says
23 "Not reasonably affected by or potentially affected
by"?

1 DR. MILLER: What about "Not within five
miles and not known to have been invaded by"?

2 DR. WIESNER: Or potentially affected by
3 a landfill.

4 CHAIRMAN WELTY: All right.

5 DR. MILLER: I just threw it out, eight
6 miles. I mean, two miles, pick something, but I
7 just like to have---

8 DR. WINKELSTEIN: It depends on the geology
9 of the area. It could be an area that is fifty
10 miles away would be unsuitable if it was on a fault.

11 CHAIRMAN WELTY: Steve, do you have an
12 answer for that?

13 MR. HOFFMAN: No. My comment would be that,
14 at this point in time, that comparability appears to
15 be based on population and not the environment.

16 DR. HUFFAKER: No. We are comparing houses,
17 not people. The only place where people entered into
18 this would be income to get into a house and/or
19 some of the economic measurements of some sort.

20 MR. HOFFMAN: People or houses or something
21 versus the natural environment that exists in a
22 similar geological area.

23 DR. DAVIS: But that is the point of my

comment. There are many environments that you could
1 pick where you would have had a previous history of,
2 for example, an old smelter or an old recycling
3 plant where you had a lot of contamination for other
4 substances or a certain kind of paper pulp finishing,
5 there are all kinds of industries that could have
6 existed around here that wouldn't exist, that may
7 not any longer exist, where you could have contamina-
8 tion from them and that is what the second part of
9 this clause is directed towards. But your comment
10 about the first one is important and I think that
11 we do have to come up with some kind of an actual
12 distance with the exception that it not be within a
13 specified period of specified distance from; and
14 not only distance, but there are distance and there
15 is all kinds of transport and fate, you know, if it
16 was on the Niagara River, for example.

17 DR. MILLER: That is why I had "or
18 otherwise" or---

19 DR. DAVIS: Yes. Could you repeat that
20 phrase? It sounded pretty good to me. I am just
21 not sure how far it should be. Do you remember
22 what you were suggesting, Dr. Wiesner, or Dr. Miller?

23 DR. MILLER: What I said was something

1 about, that it should not be within so many miles
2 of a chemical landfill or otherwise known to have
3 been penetrated or invaded or affected.

4 DR. DAVIS: Yes.

5 DR. HUFFAKER: Well, give me a clue on the
6 mileage.

7 DR. DAVIS: Well, it's the inverse square
8 law that generally applies for air pollutants, right?
9 So, I would think by that principle, if we were
10 concerned about airborne, that a mile is sufficient
11 for the pollutant. A mile is, in fact, a lot, but
12 for waterborne, which is where the other issue gets
13 into this, then we have to have that other phrase.
14 So, I think that---

15 DR. HUFFAKER: Well, a mile would be a
16 great help because then we could do some circles
17 around the known fills and rule out whole areas
18 and then we could find some places where there were
19 clean spots and look at the neighborhood.

20 MR. HOFFMAN: I question the problem of
21 dealing with trying to prepare appendices of these.
22 There was some discussion in earlier meetings about
23 the objective was to remove---to evaluate the neigh-
borhood as if Love Canal never had been present.

1 That is my recollection. Now it sounds like we are
2 setting up criteria that says not only was Love
3 Canal present, but Love Canal EDA was never in
4 Niagara Falls or any other general industrial
5 environment. That is what I hear.

6 DR. POHLAND: One was a philosophy and the
7 other was a reality. So, you couldn't realistically
8 believe that Love Canal didn't exist but philosophic-
9 ally you could approach the problem.

10 MR. HOFFMAN: Well, it sets the criteria
11 in my mind that was directing the way you were going
12 which would say that you could remain within the
13 Niagara Falls area in general and still have the
14 same general but without Love Canal present or other
15 dump sites.

16 DR. DAVIS: I don't think that is really
17 what---you are right, it gets to a very touch public
18 policy issue.

19 MR. HOFFMAN: That is right.

20 DR. DAVIS: You are right.

21 MR. HOFFMAN: That is what I am trying to
22 get some clarification on.

23 DR. FOWLKES: That was what I was thinking,
just for the record, and I would like to stay with

that.

1 MR. SLACK: I only had a question about,
2 we had talked earlier about the ubiquitous compounds
3 and it seems to me ubiquitous may be ubiquitous if
4 you look at farm land and pesticides that have been
5 applied to farm land, certain compounds might be
6 ubiquitous in the southern tier of New York State
7 and not be found so much in Niagara Falls. If you
8 remove this to someplace that might not be in New
9 York State, those certain compounds may weight
10 heavily on your findings and then if you don't keep
11 it to Western New York or Niagara Falls itself, some
12 of these things are going to determine your decision,
13 something that is fairly widespread and common in
14 the western frontier, not necessarily common in the
15 southern tier.

16 DR. FOWLKES: It's also the case that
17 residents I think tend to think in terms of the
18 comparability of Love Canal to other areas to this
19 general area, and that it has no social relevance.
20 I mean, I had a reason for saying that and I still
21 stick by it. The committee is welcome to---

22 DR. HUFFAKER: I think that you ought to
23 be able to drive over and see it and say, yes.

1 DR. FOWLKES: Well, it's a neighborhood
2 that exists in the general---within the context in
3 which they understand residents and decision making
4 around residents and I---

5 CHAIRMAN WELTY: So, you are saying it
6 would be preferable to keep it within Western New
7 York.

8 DR. FOWLKES: Yes.

9 CHAIRMAN WELTY: How do the rest of you
10 feel about that, if possible, if we could identify
11 a neighborhood that is a mile from---or greater than
12 a mile from any known toxic landfill, should we keep
13 it in Western New York?

14 DR. POHLAND: You know, the mile, however
15 you want to look at it, is a kind of arbitrary
16 figure.

17 CHAIRMAN WELTY: Sure.

18 DR. POHLAND: But you might think about
19 the way areas are zoned, you know, either now or in
20 the past. Usually zoning reflects what has gone
21 on and what has continued to go on and it may be
22 just a zoning criteria that could be applied, might
23 get you out of this arbitrariness of the one mile,
two miles, air pollutants or---

1 DR. WINKELSTEIN: Well, clearly you would
2 want to have it as close as possible and the only
3 reason you would go over a state line was because
4 you couldn't find something within the area and
5 you wouldn't start out in Indiana, you would start
6 out in Western New York to find it.

7 DR. HUFFAKER: I think you hit it with
8 Western New York.

9 DR. WINKELSTEIN: I think what we ought to
10 do is to have somebody take into account these ideas
11 and produce another paragraph for the next draft.

12 DR. HUFFAKER: I understand what Devra
13 wants but I'm not sure we can reach it because part
14 of the previous history, the patterns of contamination
15 this would go back quite a ways for the kind of
16 chemicals we are interested in and we honestly,
17 with the DEC, having a little trouble just locating
18 landfills right now, much less businesses or indus-
19 tries that may have contributed to contamination in
20 the past.

21 We will target first on the landfills
22 because we can identify these easily and then maybe
23 we will have to have some site visits to see what
the community looks like if we have a statistical

match.

1 DR. DAVIS: The geological survey has
2 published for years, big records of the major point
3 sources, and I'm talking about the major point
4 sources for the most part. If we could get an angle
5 on those and looking at those, the list that Glenn
6 has put out so far, I don't see the possibility
7 of too much overlap except for lindane. All these
8 others are---

9 MR. SLACK: That is one of your compounds,
10 the isomers, and that is so widespread, at least in
11 this area, in my opinion, that if that was one of
12 your indicator compounds, then you can go someplace
13 in the southern tier where for whatever reason you
14 don't find PHC. It may not be attributable to Love
15 Canal. It may be widespread within the City of
16 Niagara Falls and if that is one of the indicator
17 compounds, then you select a control where it isn't.
18 I think that is a problem. That is my concern
19 exactly.

20 UNIDENTIFIED VOICE: I was going to suggest
21 Grand Island as an area. I don't know what the base
22 of Grand Island is, industrial base, light industry.

23 CHAIRMAN WELTY: We will take that into

1 consideration. I think Bob is already working on
2 exactly the locations and maybe we should just let
3 him proceed with his efforts to identify a community
4 or control area.

5 DR. HUFFAKER: We have the DEC and EPA
6 documents locating landfills. That is available.
7 The information is available to us and we have all
8 the census data plus the State Department of Com-
9 merce information available, dates and so on, and
10 that is what we are looking from.

11 CHAIRMAN WELTY: Bob, can you have some-
12 thing together within a month or so?

13 DR. HUFFAKER: I think so.

14 DR. WIESNER: Tom, it seems to me that you
15 have got some quite disparate points of view on this.
16 I mean you have got Warren saying it should be as
17 close to Niagara Falls as can be and you have got
18 Devra saying it should be far away, and you have got
19 Martha saying that it should be similar to Niagara
20 Falls except for the happening at the Love Canal
21 and I actually think that that is the correct
22 approach and then you have got Devra saying that
23 you ought to rule out any other industry that might
be around it like there is in existence in Niagara

Falls and I think some of us may be forgetting that we are looking at Love Canal indicator chemicals, but I don't know how Bob could possibly, with those four points of view, and you know, from my point of view, I think it should be closer to Niagara Falls and the exclusion should be primarily related to a toxic landfill. In terms of the methodology that you are choosing and the other suggestions, I think they don't address the kind of problem that you are trying to talk about but I think you ought to resolve that before you start coming with an example.

DR. HUFFAKER: We started using the guidelines that are already in the criteria document which says the same as except not near a landfill, and the only thing I wasn't sure about was what is "not near," and you say a mile is not near and the other thing that Devra raised had not been considered at the time we started looking.

DR. STOLINE: I thought about this problem too. One of the problems I have had when I think about the control is, gee, am I thinking about a control region about the size of the entire EDA or am I thinking of a control region the size of a neighborhood because quite frankly, we are addressing

1 a lot of our statistical analyses at the, at least
2 at the first cut, at the neighborhood level. So,
3 maybe that should be the size of the control region,
4 just a neighborhood region and then the next thought
5 that I had was, are we thinking of just one? Well,
6 look at the pressure that you put on that one
7 control. Now, not only that, you are going to be
8 using it in every single solitary statistical
9 investigation and you are going to have how many
10 neighborhoods in the EDA here, thirteen or something
11 like that?

12 So, every time you make some sort of
13 comparison here with neighborhood one, you go to
14 that, back to that same control. You go to number
15 two, you go back to that same control. Well, how
16 about matching, getting a selected sort of controlled
17 matched controls.

18 Well, that seems like a big problem doing
19 that, it may be not necessary.

20 The best I have been able to come up with
21 is to think of maybe not just one control neighbor-
22 hood but maybe three, something like that where at
23 least you have got some sort of variation here among
the controls so that you maybe have---would take

1 into consideration some of the views that have been
2 expressed here right now and that may be that you
3 use three, just take neighborhood size controls
4 and use that as a single control. It may even have
5 a larger sample size in it than the sample size
6 that you would be taking out of an individual
7 neighborhood within the EDA but at least here you
8 have got some coverage here. You haven't put all
9 that pressure on one doggone control which---and
10 you have got some sort of variation here among
11 different regions and so on that would be covered
12 and I think scientifically there would be some merit
13 to that and that is as far as I have gone with my
14 thinking.

14 DR. HUFFAKER: Statistically, how would I
15 handle that? Would you merge the medians or some-
16 thing for the three controls and put them together?

17 DR. STOLINE: I think so. I think other-
18 wise you get into a hopeless statistical analysis
19 here of comparing every neighborhood to every
20 control and I think you somehow want some control
21 here that is a single control but it may not be one
22 area totally. It may be kind of collected from
23 several distinct areas.

1 CHAIRMAN WELTY: So, you have three
2 separate neighborhoods but you lump them all
3 together when you do the comparison.

4 DR. STOLINE: I think so. I think so.
5 Otherwise you end up with just a myriad of statis-
6 tical analysis.

7 MR. HOFFMAN: I have a question. How are
8 you going to deal with the fact that you are looking
9 statistically at census tracts, relatively large
10 in some comparison to three EDA neighborhood sized
11 control areas? How do you deal with that consistency
12 of your population make-up analysis and evaluation?

13 DR. HUFFAKER: Our control population is
14 within the tracts. That is the smallest unit we
15 have. The EDA is two census tracts basically.

16 MR. HOFFMAN: That is also thirteen
17 neighborhoods or fourteen or whatever the number is.

18 DR. MILLER: Thirteen.

19 MR. HOFFMAN: Is that a problem or not?

20 DR. HUFFAKER: I thought the agreement was
21 we have to compare the neighborhoods with the
22 control population. If the control is bigger than
23 the neighborhood, I don't see that as a problem.
Is it?

1 CHAIRMAN WELTY: How do the other consul-
tants feel about this, having three separate regions?

2 DR. STOLINE: I just threw that out as a
3 number, rather than one.

4 CHAIRMAN WELTY: Well, three or more than
5 one.

6 DR. SIPES: I think that is a reasonable
7 idea based on the fact that we have to keep in mind
8 we are trying to pick indicator chemicals related
9 to the Canal and that this would give us more of a
10 widespread feeling for those particular chemicals
11 in relation to different neighborhoods. That was our
12 criteria here that they are indicator chemicals.
13 So, in your case, you know, if it is PHC and there
14 is a huge concentration in the EDA and we find three
15 control areas where it is low, that is telling us
16 the exact information we want.

17 Now, we may find the opposite information,
18 that that is widespread but that is coming back and
19 telling us that that is correct relative to the
20 chemical permeation of these chemicals because they
21 do meet the criteria. They are much higher in the
22 Canal area than they are in the EDA area and they
23 seem to suggest there is some migration. So, we

1 should, in that respect, that looks like a good type
2 of marker chemical because it meets a criteria.
3 Then if we find that in the control areas or the
4 comparative area, I think the word "comparative"
5 is better than "control" because "control" means
6 something different. This is a comparative and so,
7 I think Mike's idea of having more than one neigh-
8 borhood as a comparative area---

9 CHAIRMAN WELTY: Does that meet your con-
10 cerns, Devra?

11 DR. DAVIS: I think that that goes a long
12 way towards it. I just want to be sure, I under-
13 stood Bob. Did you say that there is no place
14 within the City of Niagara Falls that is not within
15 a half a mile of an abandoned dump?

16 DR. HUFFAKER: I said something like that.
17 I don't want to be quoted there. What we have is a
18 map and the map has spots on it the size that you
19 punch out things for a ring binder. They are not to
20 scale for the dumps and in some areas they overlap
21 there are so many sites and when we get over in
22 Buffalo, there are some larger areas that look
23 pretty decent, but this area is just riddled with
them. Joe has seen those maps and it's very

difficult to find an area here where you are not
1 very close to a landfill.

2 DR. MILLER: Mike, conceptually I think
3 that is really rather---I mean, it's very pleasing
4 and in a lot of respects, the idea of using three
5 areas, but what I gathered from something Dr.
6 Huffaker said a few minutes ago, that that has some
7 implications for the case base in the comparison
8 group or what, the number of sample points?

9 DR. STOLINE: That would have to be
10 thrashed out.

11 DR. MILLER: If those are inflated, what
12 does that mean about the magnitude of difference
13 that is required? Are we creating a reverse prob-
14 lem that we have seen historically where we have
15 a small case base with a control and a large---

16 DR. STOLINE: I don't know enough about
17 the---first of all, I don't know the specific statis-
18 tical techniques that eventually are going to be
19 recommended. That is an open question in my mind
20 on that.

21 DR. MILLER: Well, is it a concern?

22 DR. STOLINE: You betcha, because once
23 you have that, then you can begin talking about the

1 issues you have raised, which is sample size, and
2 that really gets into what you want to detect and
3 with what probability. I mean, what I'm talking
4 about here is, suppose there do exist differences
5 and I think you have to talk about those differences.
6 What kind of differences do you want to detect and
7 with what power, and I'm talking about here power
8 means probability, like a 90 percent probability
9 of detecting a difference of one with a difference
10 of one, if a difference of one on your measurement
11 scale is important or maybe it's not one, maybe it's
12 25, so we say then 25 on our measurement scale.
13 The measurement scale here might be parts per
14 billion or something like that. I am just throwing
15 those numbers out but then you get into that sample
16 size issue and that then determines how many units
17 you would be selecting randomly out of each of those
18 areas.

18 DR. MILLER: But there are ways out of it.
19 It is just that we have to be sensitive to it or not.

20 DR. STOLINE: Ways out of---

21 DR. FOWLKES: Ways of solving those prob-
22 lems.

23 CHAIRMAN WELTY: Those kinds of problems,

1 as I see it, would be addressed in the statistical
2 appendix.

3 DR. MILLER: No. I wasn't speaking about
4 that. I mean, the technology is there to solve
5 that problem. I wasn't talking about the problem
6 of communicating.

7 DR. STOLINE: I think some of it is there
8 but I think someone is really going to have to roll
9 up their sleeves and work on it full time.

10 MR. HOFFMAN: It may well push the state
11 of the art.

12 DR. STOLINE: I think that is a fair
13 statement because I think there are pieces of it
14 here, I think there are pieces of it there. I
15 think what we are talking about is seeing if we
16 can put all the pieces together and organize it
17 and make it applicable to this problem.

18 DR. WINKELSTEIN: I was just going to say,
19 I think it's very wise to have multiple comparison
20 areas.

21 CHAIRMAN WELTY: How many would you recom-
22 mend? Would you agree with three?

23 DR. WINKELSTEIN: Three is better than two
but four is better than three but whether five is any

better than four, I don't know.

1 DR. POHLAND: Well, it's more fundamental
2 than that. I don't think we have determined how we
3 are going to pick the areas in the first place.
4 You know, three is certainly better than one. How
5 are you going to pick these areas?

6 DR. STOLINE: Well, that is really the
7 question I had. When I asked how are you going to
8 pick one area if you are going to go with one area?
9 That puts a lot of pressure on that area.

10 DR. POHLAND: Even with the three way, you
11 pick three and decide what kind of results you get.

12 DR. HUFFAKER: We were talking at the
13 meeting yesterday about some of the problems of
14 sampling in a control or comparison area and
15 is that the people may not want to be sampled. They
16 may not want their home sampled when the time comes
17 and we have that in some areas. It has been a
18 major stumbling block and absolutely stopped any
19 activities when you were in industrial or large
20 buildings other than private residences and in some
21 areas here we have been refused access to private
22 residences. So, if we go into a new neighborhood,
23 a clean neighborhood and ask for permission to

1 sample, I think we are going to expect to be turned
2 down on a certain number and the statisticians
3 are going to have to decide how we choose the
4 houses that we use and what to do about the turn-
5 downs and so forth.

6 CHAIRMAN WELTY: We may have to do a pilot
7 to find out what proportion of the comparison
8 households agree to participate.

9 DR. STOLINE: That is an issue that we
10 haven't even looked at. That certainly is a, one
11 of the major problems with any kind of sample
12 survey work is the actual refusal to cooperate,
13 the response rate.

14 DR. DAVIS: Yes. I think Dr. Silbergeld's
15 letter which I received and I assume that you have
16 all received it, raises these issues. It's a
17 recent letter now. This is a letter generated in
18 between the last meeting and the one that we are
19 now attending, but several people have asked me
20 about it and have not seen it. So, do you know what
21 I'm referring to?

22 DR. POHLAND: Not a letter between the last
23 meeting.

DR. DAVIS: Yes. This is a letter between

1 the last meeting. I got this one. This is dated
2 November 2nd, 1984 and it is addressed to Dr.
3 Huffaker.

4 DR. HUFFAKER: I don't believe I have seen
5 that either, Devra.

6 DR. DAVIS: Okay.

7 DR. HUFFAKER: I have sent out everything
8 that I received.

9 DR. DAVIS: Well, there may have been a
10 slip-up. And it may have gone to me instead of
11 you but let me share it with you and then for the
12 record, I will do that because I think that Mike,
13 as I hear you talking about these various sampling
14 problems that will exist and I recognize from
15 Dr. Wiesner's comments that what I was confusing
16 in my comments about the comparison population was,
17 I wanted to go the next step from sampling to an
18 epidemiologic study of the two populations and in
19 order to do that, the issues that I am mentioning
20 are very important because you would not remotely
21 be able to compare any mortality or morbidity
22 pattern from two populations if they simply had two
23 different types of pollution but what we are talking
about from the sampling point of view is that, is

1 there a significant difference in pollution with
2 respect to Love Canal contaminants, period. If
3 that is the only question, then I take back those
4 comments of mine that were directed toward setting
5 up a good epidemiological study.

6 But let me share with you Dr. Silbergeld's
7 comments.

8 I remain in fundamental disagreement with
9 the acceptance of the standard of "Comparability
10 for determining habitability." For reasons I have
11 stated earlier, this approach is unsatisfactory from
12 a scientific viewpoint and likely to prove unaccept-
13 able to the public. The public is not convinced
14 by assurances that they are no worse off than
15 others. From the scientific standpoint, the mere
16 state of being in equivalence with non-evacuated
17 areas does not necessarily imply acceptability in
18 terms of risk. Those "reference or comparison
19 areas" may themselves be unsafe. Moreover, in order
20 to determine "background" or reference areas to
21 judge habitability, the state and federal government
22 must develop two sets of data meeting rigorous
23 data quality control, quality assurance conditions.
That is, you will be required to adequately sample

1 characterize both the reference environment and
2 the evacuation area. That is what we were just
3 talking about, the difficulty in doing that.

4 It has been the position of EDF, Love
5 Canal and other Superfund sites to recommend
6 adherence to criterion standards which were
7 established without the pressures and considerations
8 of hazardous waste site remediation. We recognize
9 that such standards and criteria do not cover all
10 the chemicals found at Love Canal and moreover, that
11 the standards and criteria were developed from
12 situations of human environmental interface which
13 differ from residents in Love Canal such as drinking
14 water criteria. However, our analysis of Superfund
15 remedial actions convince us that these problems
16 are not real impediments to the acceptance of our
17 recommended approach.

18 First, although site contamination may
19 involve hundreds of chemicals, among those chemicals
20 are at least several for which standards and
21 criteria have been developed. For example, in
22 meeting a standard for dioxin clean-up, it will also
23 insure the adequate removal of concomitant PCBs,
lindane, et cetera.

1 Second, standards and criteria developed
2 for specific environmental media such as air and
3 drinking water can be adapted to soils or other
4 media using well established methods for estimating
5 exposure.

6 Well, that is a question in my opinion
7 but she suggests that and there are other comments
8 as well, but I would just want to read what is
9 germane to our discussion which is why I will take
10 this opportunity again to turn your attention to
11 what I have suggested as the first ad of my one
12 page thing here, for non-dioxin Love Canal con-
13 taminants for which ambient air or surface water
14 standards have been developed, levels of any one of
15 these pollutants in the air and groundwater of the
16 Love Canal should not exceed these standards plus
17 or minus the standard error of detection. For
18 toxic pollutants for which OSHA standards exist such
19 as chlorobenzene it should be instead of benzene,
20 chlorobenzene, exposure in indoor or ambient air
21 should not exceed threshold limit value divided by
22 a factor of six plus or minus the standard error of
23 detection.

Let me just show you the very simple

1 arithmetic of how she came up with that number and
2 I have seen the correspondence between Tom and Bob
3 on this subject and I think it's not---it shouldn't
4 be thrown out altogether because when we started
5 talking to people and telling them we are talking
6 about three years from now, maybe, if everything
7 gets going, something else is going to have to be
8 done in the meantime and this is what could be the
9 something else in the meantime.

10 The threshold limit value is the current
11 level that CSHA establishes for exposure of eight
12 hours in the work place for a healthy person who
13 works. If you were to adjust that strictly speaking
14 to a 24 hour work day, you would divide it by three
15 because the idea is that over a 24 hour period a
16 person gets exposed to whatever that TLV is and in
17 the case of benzene right now it is 10 parts per
18 million.

19 But, recognizing that the general population
20 includes sick people and old people and very young
21 people who may be more sensitive, I suggest multiply-
22 ing that by a factor of two and using six and the
23 threshold limit value is, as the cut on CDC suggests,
somewhat determined by the technology to measure the

1 substance, for example, for asbestos right now we
2 have a standard that is thought to be on the verge
3 of a limit of detection but by putting in the safety
4 factor, the twofold safety factor of six for many
5 of the toxic pollutants, I think that this might be
6 worth considering and that a rationale could be
7 written for it.

8 If you like, I can just take a moment and
9 explain how this same approach is used in setting
10 food factors in food and it is relevant to the whole
11 concept. It is, for you set a no observed effect
12 level in your animal study and by looking at the
13 animals and seeing at what level nothing happens
14 to them, you do a study, different doses and you get
15 the dose at which nothing happens to the animal and
16 then when you set your standard for that thing in
17 food, you apply a safety factor to it and typically
18 the safety factor is from 10 to 100 of the level at
19 which nothing happened to the animal and this is
20 how we do almost all of the food tolerances in the
21 United States. They are set by this technique.
22 So, there is a rationale for it.

23 Now, I'm not saying that the TLV is the
no observed effect level but it ought to be and the

1 difference is, this is an animal so you use a higher
2 safety factor because you don't know whether the
3 animal might be somehow more resistant than a human
4 and less sensitive than a human. So, you use these
5 big safety factors and there are some compounds for
6 which we have lots and lots of data so the safety
7 factor actually ranges from 2 to 100 to be precise
8 for food.

9 If you apply this rationale, and again,
10 I think that I am almost writing an appendix for
11 this, if you will, this rationale could be developed
12 and I understand the rationale and response you got,
13 Bob, to your suggestion but I don't think you should
14 give up on it because I think that the answer is
15 going to be what do we do for the next three years.
16 Is there something we could do now and Glenn and
17 Mike have been developing this list of chemicals
18 and some of the chemicals on the list as of right
19 now, I gather that it's revolving, right, some of
20 them include substances for which there are these
21 calculations and something of this sort could be
22 done. If you wanted to be even more conservative,
23 so to speak, you could use ten, but I frankly think
that the question of habitability, I would guess that

six would probably work.

1 CHAIRMAN WELTY: Are you suggesting that we
2 use---

3 DR. DAVIS: This, in addition to.

4 CHAIRMAN WELTY: But with existing data?

5 DR. DAVIS: With existing data. You mean
6 no more monitoring, no.

7 CHAIRMAN WELTY: I mean with data that
8 has already been collected, apply these criteria?

9 DR. DAVIS: I think you should do that now.
10 I guess what I am thinking of is a problem in two
11 steps, I think of this now and next and for now, you
12 could do this, and now, CH₂M Hill could crank this
13 out of their computer, right, keep them busy for
14 awhile and you could come up with some numbers and
15 you could figure out which way to do it but I have,
16 therefore, suggested adding into the document this
17 paragraph which does not say that this will be the
18 only thing to be done but this issue then, all over
19 the country there are Superfund sites and they are
20 different contaminants and the question is, how
21 clean should they clean up the site to? How clean
22 should they make them, and this might be a kind of
23 code way to start the process. That is all I am

1 suggesting and since we are talking about so much
2 more time now, I wanted to take this opportunity to
3 refer to that.

4 CHAIRMAN WELTY: The reason I asked whether
5 we used existing data or collect new data was that
6 with the criteria as they are written, we are really
7 only selecting sentinel chemicals.

8 DR. DAVIS: I understand.

9 CHAIRMAN WELTY: So, in that respect I'm
10 not sure that this would be quite as applicable to
11 that approach but for the data that has already
12 been collected, I could see where there might be
13 some utility to applying this sort of standard to
14 that data after it's been QA/QC.

15 DR. WINKELSTEIN: Suppose you found that
16 the TLV over six was satisfactory. What would that
17 tell us?

18 DR. DAVIS: You would have to pick, I
19 think, the number of pollutants, the marker pollu-
20 tants that you have. You would have to have more
21 than one. You would have to pick a number of them
22 and if this was exceeded and plus or minus the
23 standard error of detection, then I think you would
conclude that it was not habitable.

DR. WINKELSTEIN: Suppose it wasn't?

1 Suppose you concluded that it was habitable. What
2 would you do with that information? You wouldn't
3 declare the place habitable prior to that?

4 DR. DAVIS: No.

5 DR. WINKELSTEIN: So, it wouldn't really
6 matter. It would just be an additional criterion.

7 DR. DAVIS: It would be an additional
8 criterion that could be more quickly and more cheap-
9 ly obtained and it would not in any way preclude
10 the necessity for remediation.

11 DR. WINKELSTEIN: Suppose you got a TLV
12 over six that was unsatisfactory and you have
13 comparison data that was satisfactory, which would
14 take precedence?

15 DR. DAVIS: I'm sorry, this, I'm suggesting
16 you don't need comparison data with this. I am
17 speaking to the point that Dr. Silbergeld is
18 raising, that if you have evidence of contamination
19 that exceeds the TLV divided by six, that you don't
20 need to do the next step. I'm thinking of this of,
21 if you will, as a screening device.

22 DR. WINKELSTEIN: So, let me ask one more
23 question so I can understand it clearly. Are the

1 sentinel chemicals that Glenn picked out, are they
2 all covered by these criteria?

3 DR. DAVIS: All of them except dioxin
4 for which you have the one ppb.

5 DR. WINKELSTEIN: So, you could do this
6 first. What you're saying is that, to substitute
7 for comparison data.

8 DR. DAVIS: I am saying we could recommend
9 a two step approach, that this could be the first
10 step.

11 DR. WINKELSTEIN: And if this was satis-
12 factory, then you would do a comparison study?

13 DR. DAVIS: Yes.

14 DR. WINKELSTEIN: And if it wasn't satis-
15 factory---

16 DR. DAVIS: You don't have to do a
17 comparison study. If you get answers to this and
18 essentially you are looking in Love Canal and the
19 other place, Love Canal by itself, and you find that
20 for these six marker chemicals, they are all exceed-
21 ing this level in Love Canal, then you could save
22 a lot of money and a lot of time. You don't need
23 comparison data analysis. You already know then
that Love Canal is more polluted than it should be

1 by this criterion and you don't need to take the
2 time to do any more studies.

3 DR. MILLER: I have a very complicated set
4 of reactions to that and I don't think anybody wants
5 to listen to all of them. I guess one problem that
6 I have with it is that, I mean, I mean in a---I
7 guess speaking for myself, I am rather impatient
8 with Dr. Silbergeld's continuing input into the
9 proceedings of this group on the basis of which
10 they are being made. It is my sense that we have
11 begged, pleaded and implored her to come here and
12 she has never done that. At one point I thought we
13 made a decision as a group to cut off people who
14 weren't participating in a more active way and this
15 provides---

16 DR. DAVIS: Just a minute. These are my
17 comments now. So, forget about the fact that she
18 made these. These are my comments, not hers.

19 DR. MILLER: Yes, but you raised it in--

20 DR. DAVIS: But these are my comments.

21 DR. MILLER: But I want to be very clear
22 about that, I mean, not only has Dr. Huffaker
23 pleaded and implored for her to be here, we have
used our own efforts, Martha spent a day chasing

1 down Janet Brown to try to get the environmental
2 defense fund to play an active role and none of
3 those have come to pass. Now, the fact of the
4 matter is that it seems to me that her rather
5 attenuating involvement means that she really isn't
6 in touch with the kinds of thinking that is going
7 on here by a number of people who have worked
8 rather hard to get to a certain place, and I think
9 it's probably a significantly better place than
10 anyone has got to before in an effort to address
11 some of these issues.

12 Secondly, I guess I have got a problem
13 with at a certain point I begin to have a lot of
14 problems with what I see as sort of a seat of the
15 pants empiricism. You say that if you take that
16 and multiply it by two, that we somehow have a
17 standard of something. Well, why not divide it by
18 four or ten or forty or twenty-seven or ten to the
19 ninth? I mean, it is just a number. It doesn't,
20 at least as near as I can see based on what you
21 said, it doesn't seem to be---it really doesn't seem
22 to be real in the sense that you are making
23 extrapolations to the fetus, to the small child, on
the basis of a very shaky empirical base.

1 The third problem is that I didn't know
2 that there was a problem with all these people
3 sitting around who had nothing to do and that we
4 needed to find something more for them to do for
5 the interim because otherwise they might wander
6 away or something, and I guess the fourth is that
7 when I asked myself how we got to where we are, I
8 think maybe it has to do with the way we have been
9 drafting the document and perhaps in ways that none
10 of us realized because we have been so close to it.
11 We have really failed to communicate adequately
12 what we are doing and operating on that assumption.
13 I certainly wouldn't begin to try to read the draft
14 through another set of eyes than the ones that I
15 have been using. That is it.

16 DR. SIPES: To respond to that, the
17 threshold value is a value that already has a large
18 safety factor factored in. I am just making a
19 couple of comments, that there is a safety factor
20 built in there and Devra just put in another safety
21 factor. You are perfectly right in saying that it
22 could be four or could be forty. She had a reason
23 for doing that. The problem that we have faced in
 the past was that these values are set for single

1 chemicals and we are talking about a group of
2 chemicals. So, that is one of the reasons why we
3 took the comparative approach rather than the risk
4 assessment approach because we didn't know how to
5 handle that idea of synergism and antagonism,
6 et cetera. Otherwise, I would have probably been
7 more adamant in finding a way because I applaud
8 somebody who says we have a value here and let's
9 build on it something so that we can move on, but
10 our problem that we had, and I have a lot of respect
11 for Dr. Silbergeld, I wish she would have been here
12 several times, because she raised the same issue in
13 a letter a long time ago.

14 DR. MILLER: I am not attacking her pro-
15 fessionalism. It is just that I am---

16 DR. SIPES: But what we are talking about
17 now is is how another group is going to perceive our
18 decision where it may go down the tubes because
19 there is a difference in philosophy. So, we have to
20 be prepared for that and I think we are getting a
21 hint of it.

22 DR. MILLER: Well, I think that a part of
23 it has to do with the quality of communication that
exists in the draft criteria. That is all she has

1 seen, I assume, are these drafts and I don't think
2 we are doing a very good job if these old horses
3 are being drawn up and beaten to death yet another
4 time.

5 DR. FOWLKES: In other words, the case for
6 the comparison approach is perhaps not self evident
7 to us because we have worked closely together and
8 in fact, I take strong exception with her remarks.
9 It is, in fact, I would argue, the most socially
10 and scientific relevant approach and really under
11 the circumstances, in this context I couldn't dis-
12 agree with her more profoundly and I think for a
13 variety of very disparate professional perspectives
14 we have arrived without even trying to, at a
15 consensus that we are so close to that I am not
16 sure we have to articulate it outward. We under-
17 stand it and I think that is what Pat is saying, we
18 may not have presented---maybe, I don't know if it
19 needs another appendix but---

20 CHAIRMAN WELTY: We have appendix five to
21 deal with, the methodologies for determining habit-
22 ability rationale for choice of basic approach
23 comparison from among those initially considered.

DR. DAVIS: I am trying to raise a somewhat

different issue and I wanted to make it clear,
1 I am speaking for myself and I will stop speaking if
2 the camera goes on because I'm not speaking for the
3 TV camera right now. I would ask you not to film
4 what I'm saying. I'm speaking to my colleagues
5 here scientifically, having originally been trained
6 in sociology, I was really horrified at that gap
7 before.

8 I am not advocating her idea. She did not
9 develop this. I did. This is my idea. However, I
10 got it from reading what she wrote and from talking
11 to her. I have spoken to her about the delibera-
12 tions here as well and I guess what really got me
13 to thinking about doing this more was Warren
14 Winkelstein's comment that we are talking about
15 three years at least and seeing the people here
16 and their level of distress, this has caused for
17 such a long time, I am not trying to replace the
18 comparison approach. I want to make that clear.
19 I am advocating that we think of this as two steps.
20 I think the comparison approach is well merited.
21 However, I think that if we took a first step and
22 the first step were to do this and it would have to
23 be more than your marker chemicals.

1 DR. SIPES: Right. That would have to be
2 the chemicals that have standards because they are
3 presumed toxicity.

4 DR. HUFFAKER: Nancy, real early on we did
5 TLV's against the chemicals up here in the houses,
6 rings one and two, and my memory is that we were
7 off two or three logs from reaching a violation.
8 If that is correct and it holds, then the factor
9 of six or eight or twenty isn't going to even get
10 us close to the figure. So, the exercise could be
11 tried. Steve is much more familiar with the data
12 right now. How do the levels look in comparison
13 with any of the standards?

14 MR. HOFFMAN: My memory there may be way
15 off. We haven't gone down and tried to find the
16 TLV's at this point in time.

17 CHAIRMAN WELTY: Dr. Kim did have some
18 concerns about this approach. Do you want to share
19 those with us now?

20 DR. WINKELSTEIN: Which approach?

21 CHAIRMAN WELTY: With the TLV approach.

22 DR. KIM: I think that the TLV approach
23 has several weaknesses. I think if you use a
marker chemical, then again you are measuring an

1 indication of contamination and you are not dealing
2 with every chemical that is there. I think the
3 TLV's may not completely agree with you. I don't
4 believe they are equal and some of the TLV's are
5 much more active than other TLV's and I know that
6 some of the TLV's, the trichlorethylenes at the
7 TLV have shown effects in animals. So, I don't
8 agree that they are all equal or that they don't
9 have the safety factor involved in them.

10 Again, you don't measure the synergistic
11 activity and most of the compounds, the compounds
12 in Love Canal there aren't any TLV's or even
13 toxicological data. So, I think their use in this
14 kind of exercise is somewhat limited.

15 DR. DAVIS: I agree with what you have just
16 said, that is to say that they are limited and I
17 am not proposing that they be the sole decision
18 point and I am not proposing that we do not do the
19 comparison, but what I am saying is that what we
20 ought to do is a first step, is where you have TLV
21 as a group which toxicologists would agree are well
22 founded and there are some, I mean, you are quite
23 right, there is some data, but that you could use
that for the first step and if you found that for
ten or twenty for which you have the TLV, that they

1 were in fact exceeding this ratio and then you would
2 not need to do your comparison study. You would
3 say then we have to remediate and that if these
4 levels can't be gotten down, then the area is not
5 suitable for habitation.

6 DR. POHLAND: I guess the problem I have
7 with that approach, recognizing all of the weaknesses
8 in getting the data and understanding it and so
9 forth, is I felt over the many times that we have
10 met, that we have come to a consensus that we felt
11 relatively comfortable with, with regard to approach,
12 albeit it may not be the most perfect approach but
13 I think it's something we can agree upon. I'm really
14 concerned about one that has elements of arbitrariness
15 to it and certainly when you start dealing with
16 safety factors, you are starting to throw that
17 element in there and I don't think we could justify
18 the conclusions that we might draw on that basis.
19 You say it might be a fast, cheap way of making a
20 decision. I would submit that it may, in fact, in
21 the long run be a very expensive way of going about
22 things because what decisions are made may well be
23 challenged and then you can think about all the
scenarios beyond that.

1 I don't disagree with the merit of trying
2 things but I don't think we should build it into
3 the protocol that we are going to impose upon the
4 implementers of our criteria. I think it is some-
5 thing that can be discussed as a possible scenario
6 but I wouldn't want to impose it in a rather formal
7 way as I hear you saying that we should.

8 CHAIRMAN WELTY: Any other comments? Yes.

9 MR. SKUDA: I am from the Department of Law.
10 I have participated in this at various times and I
11 was at the initial meeting that set up this panel.
12 I would like to remind everybody that some of the
13 things that were discussed at that point, the most
14 notable in my recollection was the need for a very,
15 very unbiased, my assumption, approach to habit-
16 ability. Now, regardless of whether we agree that
17 the TLV's are acceptable toxicologically, whatever
18 safety factor we decide or you decide is necessary
19 to use these to evaluate habitability, someone is
20 going to criticize it and I would be very, very,
21 you know, distressed to see you poor people who seem
22 to be doing a very good effort by taking someone's
23 bias and using that to evaluate habitability. We
warned against it a very long time ago.

1 CHAIRMAN WELTY: Thank you. There was one
2 other issue that Drs. Miller and Fowlkes brought up
3 that I would like to discuss. Now, before we
4 open the session to the public comment, I would like
5 to just address the issue that Drs. Miller and
6 Fowlkes addressed related to the health studies.
7 Do you want to summarize that concern?

8 DR. MILLER: Well, you mean number three
9 on page 2 of your letter of 1 November?

10 CHAIRMAN WELTY: Yes.

11 DR. MILLER: We are not comfortable with
12 the first two sentences at the top of page 13,
13 "To date health studies of Love Canal residents
14 are inconclusive. Further studies or further
15 analysis of the existing data are not likely to
16 yield improved insights."

17 You will recall that Dr. Chalmers had a
18 similar sentence in an earlier draft he modified
19 to recognize the implications of the data on habit-
20 ability.

21 Moreover, it is certainly the case that
22 "Improved insights" will not be forthcoming.
23 Additional research is discouraged and the
consequences of the assertion at the top of page 13

will be to discourage such work.

1 We strongly urge that the draft make
2 reference to ongoing controversy and a lack of a
3 consensus in the scientific community without the
4 effect of many of the residents in the EDA. In
5 this connection we are requesting that the final
6 criteria for habitability document contain a
7 preface or a statement that refers to this lack of
8 consensus and also makes clear that these criteria
9 for habitability have been formulated essentially
10 without reference to studies of possible consequences
11 to health, past, present and future of residents
12 in the EDA and are based instead on an inferential
13 approach to health concerns.

14 DR. WINKELSTEIN: I would concur with that.

15 DR. MILLER: Thank you and I think that
16 is just part of what we were speaking to, Dr. Welty,
17 when I said that I think Dr. Silbergeld doesn't
18 really understand where we are and I think she
19 doesn't understand where we are because we probably
20 have not been very good in communicating it through
21 written word or perhaps as good as we could have
22 done, the assumptions that we have organized.
23 It would also be the places we have gotten.

1 CHAIRMAN WELTY: I hope the appendices
2 will fill that gap and I will make every effort to
3 make them implicit and understandable so that
4 people won't be left with that void.

5 DR. POHLAND: But Tom, I think it goes a
6 little bit beyond that. I'm afraid we are entering
7 into an adversary position with her and maybe we
8 ought to nip it in the bud if we can. You know, if
9 it is indeed a problem of communication, then we
10 ought to make an extra effort to make sure she
11 understands how this committee came to the point
12 that they are.

13 CHAIRMAN WELTY: How do you propose we
14 do that?

15 DR. DAVIS: I will take it as my own
16 personal responsibility to do that and if I fail,
17 it's my fault. On the other hand, I take it at
18 this point it's not that we want her to show up
19 finally after all of this time, it's more or less--
20 but sometimes it's better late than never.

21 DR. POHLAND: I would rather have her show
22 up and write a minority report.

23 DR. MILLER: Show up here rather than in
the New York Times.

1 DR. POHLAND: You know, we dealt with this
2 one time before and we rather softly sent a memo-
3 randum around suggesting that, gee, we would like
4 to have you here but apparently we are getting
5 even a stronger opposition from her now and I
6 think we should do what we can to see whether we
7 can resolve that to the point that maybe at some
8 point where we are all agreed, we suddenly get
9 scuttled, you know. I think that would be unfor-
tunate.

10 DR. DAVIS: I fully agree and I want to
11 make it clear that I am not advocating shelving
12 this approach at all. What I am simply saying is
13 that perhaps because there are so many people who
14 have been waiting for so long to make a decision,
15 that this approach could provide a kind of first
16 cut, that then one would go on and do the comparison.

17 DR. MILLER: Well, Devra, just a minute.
18 What do you think would happen if we did it.

19 DR. DAVIS: If you think of the decision
20 tree, that would be very simple.

21 DR. MILLER: That is what I am thinking of.

22 DR. DAVIS: Okay. Think of it as a
23 decision tree. You come up with a list of, let's

1 say fifteen or twenty compounds for which there are
2 TLV's and you use the safety factor and you run them
3 by one another and if all of them pass, you then go
4 on to your comparison study.

5 DR. MILLER: That is right and from, I
6 think the point of view of the money that is going
7 to be spent on the evaluation, that is very prudent
8 but it seems to me that we go and do that and they
9 all pass, then we have communicated to these people
10 out here, whether we meant to or not, reassurance.
11 I don't know whether we should be reassuring them
12 or not. We have provisional reassurance that it
13 passed the first hurdle.

14 DR. DAVIS: Yes. I would think we should
15 build into the document, no, it wouldn't pass.

16 DR. WINKELSTEIN: All it would do then is,
17 so, if three of them were positive, that would knock
18 out habitability.

19 DR. DAVIS: That is right. All it would
20 do is save a lot of time and money because if you
21 had three of them positive, then you don't have to
22 spend the time to say it is not habitable.

23 DR. FOHLAND: That would never stand up.

DR. WINKELSTEIN: You can't do them positive

1 until you finish the remedial work anyway on the
2 TLV work.

3 DR. DAVIS: Right. Okay. I am in no way
4 saying this does not in any way interfere with
5 encouraging or discouraging the whole thing.

6 DR. MILLER: Okay. Devra, if you and I
7 had four beers and we are sitting at a bar somewhere,
8 what would you assign the probability that the EDA
9 would pass all fifteen or all twenty of the TLV
10 criteria?

11 DR. DAVIS: I really don't know, to tell
12 you the truth. I would like to see what would
13 happen myself. I frankly don't know and I would
14 be curious to see what it would look like and the
15 other thing is that it could be done in like two
16 weeks.

17 DR. POHLAND: That is what my problem is.
18 I don't think we should incumber our efforts by
19 curiosity and academic interest and so forth. I
20 think that is something that can be done very
21 easily but I'm afraid of the way it's going to be
22 used and I don't think it will ever hold up under
23 peer review.

DR. FOWLKES: And it also begs the question

1 of what are the patterns of distribution within the
2 EDA which was one of the reasons for going with the
3 neighborhood approach.

4 DR. DAVIS: You are right and again, I am
5 not advocating it as a substitute.

6 DR. FOWLKES: But you see, even if it
7 didn't pass, it doesn't pass as an entire area and
8 I think all of us recognize that there are pockets
9 that are better and worse and we still haven't
10 addressed that question.

11 DR. DAVIS: I understand.

12 DR. FOWLKES: Where doesn't it pass, why
13 doesn't it pass, how doesn't it pass.

14 DR. DAVIS: Well, this is a collegial
15 process and I am convinced it is not a good idea
16 and I am not persuaded there is anyone here who
17 doesn't think that it isn't a good idea. However,
18 I still think that it is worth doing.

19 DR. FOWLKES: I would rather see the effort
20 go to the draft plan for the remediation of the
21 sewers and the streams without which habitability
22 can't go forward, period.

23 DR. DAVIS: But this is not really much of
an effort to do and that is it.

1 DR. FOWLKES: But it is some effort some-
where.

2 CHAIRMAN WELTY: Dr. Wiesner.

3 DR. WIESNER: Just a follow-up on Fred's
4 suggestion about not having people who are listed
5 on this group of experts as individual scientists
6 to be feeling like they are completely out of touch
7 and not being communicated with. It may be worth,
8 and I think Devra actually you have been talking
9 to Helen and we still have the problem. So, I am
10 not so sure, with all due respect, I am not so sure
11 having you talk with her further is going to solve
12 that problem. I would just---

13 DR. DAVIS: Would you like to do it?

14 DR. WIESNER: No. I would just make a
15 suggestion, it's not fair to say that it's only
16 Dr. Silbergeld either. I mean, I don't know how
17 many times Dr. Upton was here, once. So, he may
18 need as much help in this regard as Dr. Silbergeld.
19 I would suggest, Tom, this is just a workable thing,
20 that you identify two individuals for each of them
21 and that they get on a conference call and spend
22 some time discussing it and I would suggest that
23 for Dr. Silbergeld, that that would be somebody in

1 addition besides Dr. Davis. That is just to try to
2 you know, so it's not just one point of view.

3 CHAIRMAN WELTY: Could I have a concurrence
4 on that?

5 DR. POHLAND: I don't know her so, you know,
6 just not knowing her and wondering about putting
7 myself in that position---

8 DR. SIPES: I will call her.

9 DR. DAVIS: Glenn Sipes should be the one
10 to do it.

11 DR. WIESNER: I think it might be worth-
12 while to have two people discuss it with each one
13 of them because there is a problem with Dr.
14 Silbergeld and Dr. Upton who might have some
15 opinions too.

16 DR. FOWLKES: Has he been heard from?

17 DR. WINKELSTEIN: I would be glad to, just
18 as Devra has taken on a certain responsibility, I
19 know Dr. Upton very well. I have no hesitation to
20 talk with him and suggest that if he doesn't see
21 his way to full participation, he ought to resign.

22 DR. POHLAND: You know him very well.

23 CHAIRMAN WELTY: Glenn, can you communicate
with Devra and get together?

1 DR. SIPES: She is in Australia, right?

2 DR. DAVIS: Yes.

3 CHAIRMAN WELTY: When will she be returning?

4 DR. DAVIS: Tomorrow.

5 DR. SIPES: Tomorrow.

6 DR. DAVIS: I am sorry, Monday.

7 CHAIRMAN WELTY: Next week sometime.

8 DR. SIPES: I will catch her on Thanks-
9 giving.

10 CHAIRMAN WELTY: Who else knows Dr. Upton?

11 DR. WINKELSTEIN: I'm on first name terms
12 with him and I know him very well for many years.
13 Do you want me to talk to him or not?

14 DR. DAVIS: I can talk to Dr. Upton if
15 you want.

16 DR. WIESNER: Tom, I would suggest that not
17 just one person talk to him. I think what we are
18 talking about is a plan, a concept of developing
19 consensus around this and you are getting close to
20 the end of your process. So, somebody can't say
21 that, only his good friend can talk to him, and
22 you know, somebody else ought to join in on that.

23 CHAIRMAN WELTY: Do you want to talk to
Dr. Upton?

1 DR. FOWLKES: Are you kidding? I don't
think he would listen to a sociologist.

2 DR. MILLER: I am willing to handle the
3 other end of the phone if Warren will do the real
4 talking.

5 CHAIRMAN WELTY: Okay.

6 DR. FOWLKES: What would we say?

7 DR. WINKELSTEIN: I would say, look, we
8 are having these meetings and we miss you. We love
9 you dearly but you are really a terrible burden to
10 us because we are, you know, you have to participate.
11 That is what I will say to him and, you know, it's
12 just very awkward for everybody on the committee and
13 they asked me to tell you their feelings and I know
14 what he will say, he will say, "What should I do
15 and what should be done" and I would say, "Resign
16 or participate." What else can they say?

17 DR. MILLER: We would like to bring you
18 along. I mean, that is the point, I think.

19 DR. WINKELSTEIN: Well, the doctor has been
20 on a lot of committees and I think he is more
21 sensitive. I don't know this other person,
22 Dr. Silbergeld, whatsoever but it is placing us in
23 a very, very awkward position because this person

1 clearly has some feelings about the position we
2 have adopted and a minority opinion would be
3 disastrous, especially since everybody who sees
4 our report won't understand the context in which
5 that minority opinion might be.

6 DR. FOWLKES: She also has, I think the
7 feeling is running rather strong, that she has no
8 basis for a minority opinion, having not been a
9 member of the committee and that she can't have it
10 both ways. She is either impartial or---

11 DR. WINKELSTEIN: Well, I think these
12 people have been given the ordinary opportunity to
13 resign. I think that it's a very, very awkward
14 position and they put themselves in it and I think
15 they should be sensitive to that.

16 DR. SIPES: This is the second letter we
17 had. Remember we had one before. I hadn't seen
18 this one so I thought maybe that was---

19 CHAIRMAN WELTY: Anita, you have further
20 questions or comments from the public?

21 MS. GABALSKI: Yes, we do.

22 CHAIRMAN WELTY: I would like to entertain
23 those at this time.

MS. GABALSKI: Okay. The first question is
left over from this morning. Greg Skuda from the

Department of Law.

1 MR. SKUDA: This is really just something
2 on what you brought up this morning in terms of
3 changing the decision tree for evaluating homes and
4 then going outside should the home fail, to check
5 to see whether there is a secondary source. I guess
6 I would enlarge upon that in asking, in neighborhoods
7 that you deem at some point habitable, suppose there
8 are vacant lots on that from past demolitions.
9 How are you going to evaluate those for future
10 construction and future use?

11 DR. FOWLKES: You mean you are not looking
12 at a home?

13 MR. SKUDA: No. You are looking at a lot
14 that had a home and has been removed at some point.

15 DR. FOWLKES: That is the same question
16 and for rentable dwelling units. Now, what about
17 the rest of the property, I don't know how to
18 answer that because my own feeling is that we should
19 be making a kind of total assessment with respect
20 to occupancy and general movement through the
21 neighborhood but I don't know if we are allowed to.
22 I don't have any objection to expanding the current
23 hearings into some sort of assessment of usage of

land and related neighborhood buildings but---

1 DR. POHLAND: I think, in my own opinion,
2 even though that should be something that we con-
3 sider routinely as we go along, I think that is
4 something that we should not get involved in,
5 frankly.

6 DR. FOWLKES: You think we should not.

7 DR. POHLAND: I think we should not because
8 I think that you can develop all kinds of scenarios
9 that may or may not be real and I think we will
10 not know whether they are real until we actually
11 get into the process of determining.

12 DR. FOWLKES: Could I suggest that maybe
13 you and I talk further for we have to address it,
14 I think, in writing. There has got to be our
15 rationale and I am sure there is a good one, but
16 right now we haven't even had any discussion of
17 this to introduce that into the draft criteria as
18 to what the parameters are and why.

19 DR. POHLAND: See, I think it is a step
20 that follows after the first decision is made,
21 whether it is habitable or inhabitable, uninhabit-
22 able, and at that point, then I think these other
23 scenarios become real issues. If it's habitable,

then---

1 DR. FOWLKES: You are suggesting that
2 habitability implies maximum usage and if it meets
3 the criteria for habitability, then we go on to
4 assess---

5 MR. SKUDA: But that is not evaluating a
6 vacant piece of land, potentially not evaluating.
7 In a sense, you are weighting the decision away
8 from a potential piece of property that will not
9 get inhabitability out. I'm just wondering, you are
10 not looking and therefore it's the old question,
11 what happens if I get a nondetectable value? I'm
12 not looking at a piece of property that you later
13 then declare habitable and we go on to build on
14 that area and for whatever reason, it is loaded
15 with chemicals. You would never look. You don't
16 know.

17 DR. POHLAND: Yes. That is a different
18 issue. I would hope whatever monitoring protocol
19 or testing protocol that is developed would handle
20 that issue at that point.

21 DR. FOWLKES: But then I think we are talk-
22 ing about criteria to address residential units or
23 potential lots that would be built on residentially.

aren't we?

1 DR. POHLAND: However we set up our choices
2 of sampling location, I frankly feel it doesn't
3 matter whether it's on a vacant lot or a home,
4 except for the types of samples we might take in
5 those respective spots, but a soil sample on a
6 vacant lot is just as meaningful as a soil sample
7 on an occupied lot and I would hope that the sampling
8 protocol would give us that kind of information also.

9 DR. FOWLKES: But that we would routinely
10 test the individual lots as well if considered to
11 be a residential lot.

12 MR. SKUDA: Yes. I bring it up. It needs
13 to be thought about.

14 DR. FOWLKES: Yes. It doesn't answer the
15 Reverend's question but it does, I think, include
16 residential potential.

17 CHAIRMAN WELTY: I thought we answered
18 Rev. Dyer's question.

19 DR. FOWLKES: Did we?

20 CHAIRMAN WELTY: Maybe you were out of
21 the room. We did say that churches and businesses
22 would be included in the criteria when we revise it.

23 REV. DYER: I had purchased two buildings

and we are waiting. If it all proves habitable, we
1 can go ahead and build.

2 CHAIRMAN WELTY: Well, that area that is
3 in those lots would be factored into the sampling
4 protocol. As you know, the sampling protocol will
5 come out as so many samples per the neighborhood.
6 So, it would just be a random event whether or not
7 your lot was selected or not but the question you
8 asked about the churches and the other businesses,
9 we will include churches and businesses in that
10 same monitoring as we do for the houses.

11 DR. WINKELSTEIN: If they wish to be.

12 CHAIRMAN WELTY: If they wish to be, yes.

13 Now, have we answered all the concerns that
14 you had?

15 MR. SKUDA: Yes.

16 CHAIRMAN WELTY: Okay. Joann Hale, do
17 you have further questions?

18 MS. HALE: Yes. I was just going to ask
19 Dr. Davis, on the TLV to be used, possibly used, is
20 that going to be with the old data or did I mis-
21 interpret something? Is that supposed to be with
22 old data?

23 DR. DAVIS: What I have been trying to

1 suggest here is that, and which my colleagues here,
2 except for one who has been generally supportive
3 but hasn't spoken out this morning but has
4 previously, is that because of the amount of time
5 that it has already taken and the amount of time it
6 will be taking in the future, that we could set up
7 a structure where if you had a negative from this
8 test, it wouldn't mean that Love Canal was safe.
9 It would not mean it was safe and we could say that.
10 A negative result would not mean it was safe but
11 if you had positives, then you would know that it
12 was not habitable.

13 MS. HALE: But that is the old data. That
14 is what I am saying.

15 DR. DAVIS: And you could do it with the
16 old data for starters but also you would have to get
17 new data.

18 MS. HALE: Because I just had a problem
19 with the old data being collected, substandardly
20 five years ago and the technology, that is all, I
21 was just wondering.

22 DR. DAVIS: Yes. No, no, no. It obviously
23 would not be sufficient to only use the old data
and I am not advocating that.

1 MS. HALE: And then I was wondering about
2 how long the land will be habitable or uninhabitable.
3 Are we talking about forever? How long are we
4 talking about, until the remediation is completed
5 or until another group comes in? Do you know what
6 I am saying? How long will it be habitable or
7 uninhabitable? Will it be forever once you guys
8 make your final decision along with the EPA, the
9 DEC, or is it going to be in accordance with the--
10 I don't know what, who knows. Is it going to be
11 20 years, 50 years, 100 years, forever?

12 DR. HUFFAKER: That is a good question.
13 I don't think it would be possible to turn the
14 community off and on like a faucet. If you decide
15 it's habitable, then it should be as habitable as
16 we can determine at that time. The next piece of
17 business it would be to assure that it stayed in as
18 good a shape as it was at that time and this is why
19 Fred Pohland was concerned about the operation of
20 the treatment plant and things of that sort, the
21 integrity of the Canal cover and those things.

22 MS. HALE: But a new administration can't
23 come in and say, "Well, we are going to deem this
habitable because we have now got a shortage of land

1 in Niagara County and we need it." That is what I
2 am wondering.

3 DR. HUFFAKER: That would, I think that
4 would be another problem. They couldn't do it
5 without going through condemnation proceedings and
6 so on once private people have held it. No one
7 was told they would have to leave.

8 MS. HALE: That is correct. I have said
9 that all along. Okay. The last question was, I
10 just have a problem with one of the alternatives
11 to the sewer and treatment and the problem tends
12 to be that they could follow RECRA laws on placing
13 it back into the Love Canal, all right. Now, if
14 they were to do that, we would still have the
15 problem of a landfill in a neighborhood area if the
16 areas are habitable, but if they were to place a
17 new landfill, say, on Grand Island somewhere, it
18 couldn't be too close to a residential area. So,
19 I understand you keep saying remediation is a very
20 important part in this but how important? I mean,
21 you wouldn't put a landfill in the middle of a
22 residential section on Grand Island. Right now you
23 just wouldn't move in there. So, if you are going
to consider or if they are going to consider.

1 replacing Canal material back in there that came
2 out of the Love Canal, then that would be on the
3 same basis 40 years down the road again. So, what
4 I'm saying is that they could follow the RECRA laws
5 by putting the material back into the Love Canal,
6 the stuff that came out, not the new material or
7 something. How can you put up a landfill in the
8 middle of a residential area and yet still deeming
9 the houses possibly habitable or uninhabitable,
10 whatever is going to be. You wouldn't do it on
11 Grand Island and you wouldn't do it in Albany. You
12 wouldn't do it in, you know---

13 CHAIRMAN WELTY: Joann, the way the
14 criteria are written, effective remediation is a
15 prerequisite to declaring that the neighborhood is
16 habitable. I'm not sure if that answers your
17 question but---

18 MS. HALE: What I am saying is that they
19 put it back in Love Canal. No one is going to live
20 in Love Canal anyway. They may live in the EDA
21 area but they are not going to live in the Love
22 Canal. So, I mean, what I am saying is that they
23 may clean out the sewers but 20 years from now it
may leak out of the Love Canal again.

CHAIRMAN WELTY: That is why remediation

and the effectiveness of remediation needs to be monitored and that is included within the criteria.

1
2 MS. HALE: But how long do we monitor until
3 we decide it's a neighborhood or not a neighborhood?
4 That is what I am wondering.

5 MR. PITRUZZELLO: I don't know the answer
6 to that. Most of the monitoring, to my understand-
7 ing, is up to 30 years and I would assume there
8 would be no leachate after 30 years. So, that is
9 30 years down the road.

10 SISTER HOFFMANN: We would have to have
11 people watchdogging it or the state, whoever is
12 doing it, and as long as it's watchdogged, that is
13 your answer, Joann. It is just common sense sort
14 of a thing but that is it. The guys from the state,
15 they have been saying that too.

16 DR. STOLINE: You know, in our flow chart
17 that we have, we have a flow chart that says are
18 the levels above in certain areas that we are
19 comparing them to. If the answer is yes, then it
20 goes down and says remediation. Now, I suspect
21 that remediation process, I don't know whether we
22 are going to have an appendix on this but I suspect
23 what you are talking about is that some governmental

1 official will have to do just exactly what you are
2 talking about with respect to your situation here,
3 there will be three or four alternatives and they
4 will be brought out to the public and there will be
5 thorough public input and there would be dollars
6 put in there, an assessment of dollars, some
7 decision is going to have to be made about whether
8 to be remediated or not, and if there is remediation,
9 then you get back into the flow chart and you go on.

10 I think it is impossible to put a time
11 frame on that, but at least our flow chart has a
12 point there where there is a pause and I assume
13 that those things will be done as far as the public
14 officials getting involved but---

15 MS. HALE: There is no problem with
16 putting a landfill, a new so-called secure landfill
17 under RECRA in the middle of a neighborhood?
18 I have a real problem with that. I don't think
19 they would do it in Binghamton or Albany or
20 Washington, but if you come here to Niagara Falls
21 and dump it, yes.

22 CHAIRMAN WELTY: Joann, did you have any
23 other questions?

MS. HALE: No. I'm all done.

CHAIRMAN WELTY: Violet Iadiacco.

1 MS. IADIACCO: Yes. I just wanted to say
2 before, I didn't get a chance to finish, in regard
3 to the treatment plant being state of the art. I
4 also noted when I was in there that the equipment
5 for monitoring the southern end was malfunctioning
6 and I asked about it and was told that it had been
7 malfunctioning almost since day one and because of
8 the fact that it had to be monitored manually and
9 I thought, you know, anything that was state of the
10 art would not have malfunctioning monitoring equip-
11 ment in it and also I wanted to make a comment about
12 the fact that recently Dr. Huffaker was noted as
13 saying that the soil in the northern end around
14 Mrs. Smith's property over there was no worse than
15 in any other industrial area and yet now Mr. Slack
16 notes that 93rd Street School is a big problem.
17 It's one of their major problems at the time being
18 and since this 93rd is on the other side of the
19 creek and Mrs. Smith is on the other side of the
20 creek, you have two people now in conflict and that
21 is what we have been facing right along. It is
22 that one says it is and the other one says it isn't
23 and you both are very qualified people. So, we

1 don't have the expertise to tell you you are wrong
2 but at the same time, you have to put yourself in
3 our shoes and see, what are we supposed to do about
4 these things. You know, when you have people who
5 are so qualified as you are and you don't agree,
6 what are we supposed to think?

7 DR. HUFFAKER: I can't help you with that.
8 I can give you a little background on what happened.
9 We asked EPA if they would sample Mrs. Smith's
10 yard and it was a peculiar sewer arrangement there
11 that made it look as though it was the desirable
12 thing to do. What we found was that the level of
13 chemicals were not of concern. They were diminimus
14 and I don't know how else to say it. We couldn't
15 say that they were of no health concern whatsoever
16 because if you ate them, perhaps, but there were no
17 acute health concerns from the level we saw. Since
18 then I have seen the draft of the EPA which did the
19 dioxin for that and they didn't find anything there
20 either.

21 Now, this was surface soils in the back
22 where the creek would flood up in the yard where
23 the garden was and then we proposed to dig a hole
next to the foundation of the house to find out if

1 the water coming through the house was being
2 contaminated via the sewer with any sediments from
3 the creek. That hasn't been done yet because there
4 is a porch in the road where we felt we wanted to
5 dig. We talked with Mr. Smith more about that.

6 The other thing is that on the 93rd Street
7 School ground, across the creek which was all fill,
8 at one time as I recall there was a municipal fill
9 and there was fly ash put in there and in '78 or '79
10 we did monitor that and we found in the parts per
11 trillion dioxin. So, that is not news what is out
12 there at all. The dioxin in the fly ash, it was
13 covered, whoever filled it and they put the fly ash
14 in over the tree stumps and the old bed springs
15 and then they put a layer of soil over the top of
16 that and they used it as a playground. After the
17 dioxin was found, the school was vacated and it has
18 not been used since then.

19 Now, my understanding in talking to the
20 DEC and the EPA is that the 93rd Street School has
21 been declared a separate problem and they are going
22 to try to approach that and figure out what to do
23 about remediation on there.

We have not identified the problem in

Mrs. Smith's yard. We have a problem in the creek
1 and that is where the information runs out.

2 CHAIRMAN WELTY: Violet, does that make
3 things understandable?

4 MS. IADIACCO: I understand that is where
5 the problem is, is in the creek but what I don't
6 understand is how one side can be very dangerous and
7 the other side can be looked on as not being very
8 dangerous.

9 CHAIRMAN WELTY: Well, Mrs. Smith's yard
10 didn't have the fly ash fill I guess would be an
11 answer to that question.

12 MS. IADIACCO: But the creek is the same.

13 SISTER HOFFMANN: Mrs. Smith has always
14 said, the creek, how can it stop at one half the
15 creek. She owns half, let's say she owns half of
16 the creek. So, if it's in the creek, it is on her
17 side. I mean, that is Mrs. Smith's comment. That
18 is how she described it.

19 MS. IADIACCO: And she maintains that the
20 creek rises and there are some of those pipes that
21 used to flow out of her house, they can back up and
22 be into the cellar.

23 CHAIRMAN WELTY: Right, and that is why the

1 sampling was done. The sampling did not show
2 levels of concern. I guess that was it.

3 DR. HUFFAKER: Right. There were two
4 items of concern. One was did the old sewer carry
5 liquid from the creek into the basements since the
6 line was believed to be open. We haven't ended
7 that discussion yet. We are still trying to sample
8 next to the house where the water is. The other
9 one is, when the creek floods, did it bring material
10 up and then when it did, did it leave it on the
11 ground or on the grass or on the surface, and the
12 answer is that we didn't find it if it was there.
13 So, we don't believe that it did. I think the
14 answer for her also probably applies to her neigh-
15 bors who have similar yards.

16 Now, I don't know what the creek bank
17 looked like before the people moved in, whether one
18 side of the creek was shallow or what. They did
19 fill on the 93rd Street School side, I don't know
20 whether they did it or not on Mrs. Smith's side but
21 we didn't dig any holes in the back yard so I
22 can't answer that. I don't know what the situation
23 was there. We didn't find anything in Mrs. Smith's
yard to believe that this was an item for concern.

There is on the 93rd Street School yard.

1 MS. IADIACCO: Possibly there could be if
2 there was a backup into her house from the creek,
3 there could possibly be even though there is
4 nothing in the soil right now, there could possibly
5 be.

6 DR. HUFFAKER: According to Mrs. Smith,
7 when they moved into the house, the soil line from
8 the plumbing went straight into the creek, not
9 septic tank or anything. The city sanitarians said
10 you can't do that, you have to hook into the
11 sanitary sewer line. So that the sewer came out of
12 the back of the house, they dug a hole, broke into
13 the sewer line and routed it around the house and
14 went into the sanitary sewer. We asked if they city
15 we asked the city sanitarian, was it the policy at
16 that time to cap those or plug those where they
17 broke into them, the old ones. He said no, he
18 didn't think it was. They just simply knocked the
19 tile out and put an elbow on it and went around the
20 house and left. This left us with the possibility
21 that the line still might be opened, carrying water
22 to the house and that was why we suggested we dig
23 the hole on the outside of the house where the

1 sediment would be in the water if it was coming out
2 of the broken line and this is what has not yet
3 been done because the porch is in the road and
4 Mrs. Smith doesn't want us to take any of the porch
5 apart.

6 CHAIRMAN WELTY: Violet, was there anything
7 else?

8 MS. IADIACCO: Not at this time being.

9 CHAIRMAN WELTY: Sister Margeen.

10 SISTER HOFFMANN: I think my question was
11 answered, something to do with the testing. I think
12 Dr. Welty answered about the testing in the churches
13 and like the center and so forth. The question or
14 the comment you were talking about, the problems
15 about staying there and that comes up and as
16 Dr. Huffaker pointed out, we didn't tell anyone they
17 had to go, leave there, and I guess I was going to
18 say I agree the more I heard the discussion, you
19 can't set a time line and it's very difficult to
20 set time lines on this for the people who may live
21 there but there was a lot of pressure. I think
22 that led up to the discussion this morning about
23 what Dr. Daggett may have said or not said about
habitability but the people, they had a choice,

1 either to leave or to stay. No one can set a time
2 frame for that so I guess I'm on the side of the
3 people, saying we can't be pressured into say it's
4 going to be three years, five years or whatever.
5 People who live there now have to make a decision
6 whether or not they want to stay or they want to
7 go and if it takes five years, then they have to
8 live with that. It isn't any different. The more
9 I think about it, the more I view this, it really
10 isn't any different than let's say a flood or a
11 hurricane or a tornado. It happens, it happens, and
12 you live with the consequence and it isn't a happy
13 consequence but those are the choices. They are
14 tough choices and people make tough choices all the
15 time and I guess what I'm just saying is that I have
16 at times been very disturbed by the time element,
17 the length, and I think it has been very difficult
18 for the people who live there to live under that but
19 they have to make a choice and it has to be done
20 right or you are going to live with the consequences,
21 the State of New York, all of us, engineers, every-
22 body, long after you and I are gone, in dealing with
23 the consequences. So, I guess you might as well do
it right, as right as we can now, and I know it's

difficult. I just wanted to make that statement.

1 I don't like it but I guess---

2 DR. HUFFAKER: Just a couple of comments,
3 one is, these people were misled because when we
4 started this, we borrowed money from the federal
5 government with the understanding that all this
6 would be settled and we would be back in or out in
7 a couple of years or something like that. The note
8 came due the other day and we weren't back in and
9 we didn't have any money to pay it. So, this was
10 not an intentional thing on anyone's part. It was
11 simply that it's taken much longer than anyone
12 anticipated. The intention was at the time of the
13 temporary evacuation that it would be settled.

14 SISTER HOFFMANN: Just another comment for
15 the record, concerning the sociological, socio-
16 political perspective, and we were talking about this
17 before and it was correctly pointed out that this
18 was observed and written about, that a lot of this
19 decision about whether to buy and we are talking
20 about lots of commercial properties, church proper-
21 ties, rectories and so forth, what is really---yes,
22 what you might call political, I guess, but it was
23 between two administrations, the federal administra-

1 tion and the state administration, Carter versus
2 Carey, and that was a compromise that they came to,
3 if you can call it a compromise, negotiation,
4 whatever. We give you money for the houses that
5 you just stated, we will have this cleared up but
6 let's not take away those things that are symbolic
7 in a community and keep it running, churches, stores.
8 We can get this thing restored, revitalized,
9 rebuilt, but we won't have taken away the commercial
10 things that make that thrive. Now, I challenged
11 that by those who were directly there on the
12 periphery to some of that discussion or through the
13 study and research people. So, we are living with
14 it, yes, like I pointed out this morning, not only
15 the technical things, scientific things, but
16 economic perspectives and socio-political things
17 that happen. So, it is a social, political,
18 economic, scientific, technical problem and you
19 can't separate that. I stand corrected on that but,
20 you know, there are many smarter than I and didn't
21 tell me that it was one or the other or two of those
22 or three of those and it is not the other, fine.
23 That is how I feel about it because when you are
 dealing with it directly like you are and you are

1 the people that have studied it, that is, I think,
2 what you have to say. I guess that I just wanted
3 to point that out. We are living with these
4 decisions that were made politically. We are
5 suffering from and living with, suffering with the
6 broadest sense, sociological realities and we are
7 reaping the economic consequences in dealing with
8 the scientific issues. So, I guess it's the whole
9 ball of wax and it's all mushed up in here and I
10 think that is where we get into tangles sometimes
11 in the community perspective, one scientist says
12 one thing and tells us that and the technical sort
13 of thing and somebody else comes with another thing
14 and the residents come and say we want you to tell
15 us that it will take you two months to get it done,
16 three months or something, so I can get on with the
17 rest of my life and I don't know how to resolve that.
18 Thank you.

18 DR. MILLER: That was a very nice statement.

19 DR. HUFFAKER: We have got to solve the
20 political problem with science.

21 CHAIRMAN WELTY: Mr. Laverdi.

22 MR. LAVERDI: I would like to agree with,
23 for once I would like to agree with Sister Hoffmann.

1 I also would like to state that I think it's very
2 important of the facts of this issue. The very
3 facts of this issue, you understand, that we are
4 trying to surface here and this has been, because
5 we don't know everything about these chemicals,
6 Sister, and what took place, you understand, and
7 the magnetism of it in the newspapers and in the
8 press and the magnitude of it was just unbelievable
9 to say the least. It devastated this community.
10 You know it as well as I do and the manner and the
11 tactics that were used by groups such as, and I will
12 name them, such as yourself, the Home Owners Association
13 and other groups that came into our area,
14 instead of trying to help to find out the facts,
15 the people, even the FEMA agency that you were
16 contracted with, came out there to help us, the
17 people from the Love Canal to help us, you know
18 what I mean with all our problems that we had,
19 instead they sent outreach workers in there to
20 terrify the people, not to find out, since we had
21 an opportunity, since we had a school like Dr. Welty
22 pointed out where children play on the playground
23 for four hours a day, were in the school for five
hours a day, and children playing in that particular

1 playground four feet from that Love Canal, we had
2 an opportunity and I stated we had a great opportunity
3 to study the very controversy that we are having
4 here over the effects of the hazardous waste. That
5 opportunity was given to us, Sister, and you know
6 it as well as I do now that you look at the facts
7 but in the manner, you know, it was just unbelievable
8 to say the least, where the people that came in here
9 and panicked the whole community with the tactics
10 that were used, the unfairness and the injustices
11 that were done to the people in the Love Canal
12 community and throughout the community of Niagara
13 Falls. Here, instead of comforting people, now,
14 here in her report she states that because the
15 home owners were loaded with dough, they were
16 getting money from all over the country to be used
17 for the particular cause of the Love Canal issue,
18 we had a housing project---

18 DR. MILLER: Would you find that for me?

19 MR. LAVERDI: Yes.

20 DR. MILLER: I would really like to see
21 that.

22 MR. LAVERDI: Could I explain myself? Let
23 me explain. Give me an opportunity to explain this.

You said, you more or less stated---

1 DR. MILLER: No. I would like to see it.

2 MR. LAVERDI: Right. You stated in the
3 report, you said because of the Home Owners Associa-
4 tion---

5 DR. MILLER: I would like to see that.
6 When you find that, I will come back. When you find
7 it, I will come back.

8 MR. LAVERDI: Now, look, I mean, I just
9 want to show you and say that I believe that every
10 pertinent and relevant thing to this Love Canal
11 issue should be right over here on this table, right
12 over on this table. In fact, I recommended that we
13 have a complete Congressional hearing over this
14 particular issue because we got the people that
15 lived in the Love Canal now that were terrorized
16 out of the Love Canal and into the NUCO dump a quarter
17 of the same people in the same situation that they
18 were in in the Love Canal.

19 So, what I'm saying, Sister, is, and you
20 know as well as I do, the unfairness and the tactics
21 that were used at Love Canal. It was just unbeliev-
22 able to say the least. It was not just between
23 groups but between the federal government at the

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time and a whole lot of other people.

1 Now, I believe and I still believe that the
2 Love Canal was dangerous and I think that the
3 governor did right and I think that Axelrod did
4 right, okay, but I believe it today, understand, the
5 truth of the whole thing and that was that school,
6 you understand, was diverted into the other homes
7 all over, you know, beyond the fence to 102nd Street
8 with the theory of Dr. Paigen and her swell theory,
9 and I mean, it was just unbelievable to say the
10 least and I think that the truth of the facts should
11 all come out in this particular issue of the Love
12 Canal and I'm going to be as persistent as them
13 chemicals, dioxin, to see to it that it does and
14 that is all I would like to say.

15 I would like to apologize to Dr. Miller
16 and Dr. Fowlkes. It's not personal. It's the
17 issue. Now, you doctors are all doctors in different
18 areas of the scientific community but I am a doctor
19 in Love Canal as far as I am concerned on the facts
20 pertaining to that issue, okay. That is all I
21 would like to say.

22 CHAIRMAN WELTY: Thank you.

23 MR. LAVERDI: And I wish the whole panel of

1 doctors were here. I mean, they all disappeared.
2 When the public has something to say, we find an
3 empty table.

4 CHAIRMAN WELTY: That is why we had the
5 public comment at noon today.

6 Are there any other comments?

7 (No response.)

8 CHAIRMAN WELTY: Off the record.

9 (Discussion off record.)

10
11 (Whereupon, the above proceedings were
12 adjourned without date.)
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