

1 would have eliminated a large proportion of the
2 febrile convulsions and may have been, you know,
3 a little---been of more value to us as a group.

4 CHAIRMAN AXELROD: Any other questions?

5 (No response.)

6 Then why don't we break for lunch then.

7 Thank you.

8 (Whereupon, the above proceedings were
9 adjourned for lunch.)

10 LOVE CANAL COPY

11 DO NOT REMOVE!

12
13 PROCEEDINGS AFTER LUNCHEON RECESS:

14
15 CHAIRMAN AXELROD: We will now commence
16 this session. Now, I am being accommodated so
17 that I can leave here earlier than I had original-
18 ly had anticipated and I wanted to invite the
19 opportunity for the public interaction to occur
20 prior to my departure and for anyone within the
21 public to address questions directly to me or to
22 other members involved in developing the
23 habitability criteria. So, if you could all sit

1 down, we will open the meeting up. Anita, do you
2 want to take over?

3 MS. GABALSKI: Yes. We don't have any-
4 thing formalized or organized but there are a
5 number of people who did come with questions
6 however. I think we will start with Joanne Hale.
7 Do you have a question?

8 MS. HALE: What I was wondering was,
9 has the Department of Health done any subsequent,
10 continuing sampling since 1978 to determine what
11 extent the toxic chemicals have migrated from the
12 Love Canal, and along with that, into the sur-
13 rounding area, including the soil, air and sump
14 sampling since 1978 and has it been done during
15 the four seasons that we have in Western New York?

16 CHAIRMAN AXELROD: I am going to have to
17 defer that to the Department of Environmental
18 Conservation. Joe, do you want to comment on
19 that?

20 MS. HALE: No, I was wondering about the
21 Department of Health.

22 CHAIRMAN AXELROD: The Department of
23 Health would not be doing that kind of sampling.
We would be doing the analysis on samples that

1 had been collected by someone else and that would
2 be an environmental sampling. We would not be
3 doing that sampling.

4 MS. HALE: But you would be doing the
5 analysis?

6 CHAIRMAN AXELROD: We have a---the
7 Department of Health has a laboratory capability
8 and operates under contract with the Department
9 of Environmental Conservation. So, the Department
10 of Environmental Conservation collects the samples
11 and sends them to the laboratory for processing
12 but we would not be collecting the samples. Joe,
13 do you want to comment on that?

14 MR. SLACK: Joanne, do you have any
15 specific questions on what has been sampled?

16 MS. HALE: Yes. I was just wondering,
17 is it specifically excluding sewers and creeks?

18 MR. SLACK: Sampling that has been done,
19 the sampling results are reported in the Malcolm
20 Pirnie Report which is an Environmental Conserva-
21 tion document and that is basically sewers and
22 creeks.

23 MS. HALE: But that ended in 1983.

MR. SLACK: That is correct.

1 MS. HALE: So then although the treat-
ment plant was finished in 1982, you haven't---

2 MR. SLACK: The treatment plant was
3 finished in about early 1980. We went on line in
4 December of '79.

5 MS. HALE: When was that in place, though?

6 MR. SLACK: That was in place and opera-
7 tional December of '79.

8 MS. HALE: '79?

9 MR. SLACK: Right.

10 MS. HALE: Because when I called the
11 Information Office, they told me---

12 MR. SLACK: Yes. The other sampling that
13 has been done by the DEC recently is the work that
14 was done along the proposed alignment of the
15 ground water cutoff wall. A series of soil
16 samples were collected and analyzed and that
17 information was available in the report.

18 MS. HALE: I am talking about the RDA
19 area, the sampling ended in '83 then?

20 MR. SLACK: Yes. That is correct.

21 MS. HALE: So, nothing has been---

22 MR. SLACK: We have recently collected
23 some more samples in the Bergholtz Creek in response

1 to a concern about whether there is more fencing
2 to be put along the Bergholts Creek. Those samples
3 haven't been analyzed yet.

4 MS. HALE: But nobody---

5 MR. SLACK: People still live near the
6 creek.

7 MS. HALE: And then the four seasons
8 also, was it collected during all four seasons or
9 the wet season, spring, summer, winter and fall
10 that we get?

11 MR. SLACK: We have some monitoring wells
12 at Love Canal that are monitored monthly for water
13 elevation and from which ground water samples have
14 been collected periodically for chemical analysis
15 and that data extends from 1979 to date.

16 MS. HALE: Is that off site?

17 MR. SLACK: That is basically within the
18 fenced area.

19 MS. HALE: It doesn't consider outside
20 the fence area?

21 MR. SLACK: That is generally true.

22 MS. HALE: All right. Thank you.

23 MS. GABALSKI: Sister Mark Margeen of
the Ecumenical Council.

SISTER MARGEEN: I have three questions.

1 The first one is, you are evidently aware of the
2 OTA, the Office of Technology Report and you have
3 read that study, studied that. What is your over-
4 all response to that? That is the first question,
5 and then, what health studies need to be done
6 before the determination of habitability can be
7 made and thirdly, before people can be moved back
8 into the Love Canal, what further information,
9 type of testing, et cetera, do you feel has to be
10 done?

11 CHAIRMAN AXELROD: Well, first of all,
12 I have refrained from commenting on the OTA Report.
13 I think we have indicated a concern for some of
14 the evaluations, some of the comments. I think
15 that certainly it is possible for different people
16 to have different interpretations and to question
17 the reliability of pertinent facts. I think that
18 our position has been that all of the information
19 needed to be re-evaluated and the current meetings
20 that you are witnessing are part of that effort to
21 re-evaluate all of the information.

22 If I knew what health studies needed to
23 be done before making a determination of habitability,

1 we wouldn't be here now and I think that what we
2 are asking the people who are participating in this
3 evaluation to provide us with are those kinds of
4 information that they feel are lacking or should
5 be provided or reanalysis undertaken to provide us
6 with criteria to be used for making determinations
7 for habitability. So, if I knew the answer to that
8 question, we wouldn't have to have a group of
9 experts here to evaluate it for us.

10 So, I think I can't answer your question
11 to definitively give you all of the studies that
12 need to be undertaken because that is precisely
13 why we have agreed to convene the panel to bring
14 together all of the experts that we have here to
15 have a variety of different disciplinary expertise
16 to bring to bear upon the issues.

17 So, I think that we are looking to this
18 panel, this group of individuals, to provide us
19 with the criteria that are to be used in the
20 identification of any additional information that
21 needs to be obtained before making those judgments.

22 **SISTER MARGEEN:** Thank you, Doctor.

23 **MS. GABALSKI:** Rev. Dyer.

REV. DYER: I am with the Colvin

1 Boulevard Church of God and the question I would
2 like to raise is that, why are people still being
3 forced to live and to function in their businesses
4 in this area, and you haven't determined that it's
5 safe? It brings a special problem where a church
6 somehow in the middle of a block, they put the
7 fence up and the house behind the church, every-
8 thing was horrible with it, it was torn down and
9 the church was remaining there. The church home
10 is there and these special problems that I am
11 addressing are about the fact that because of the
12 fact that we are being forced to live there and you
13 haven't determined that it's safe brings into our
14 mind, because our pastor, the pastor before us,
15 before me, he left because he had colon problems.
16 Many Sundays he was not able to come to church
17 because of his special colon problems. My wife
18 has just been operated on and she had some body
19 cancers and I had to ship her back to Kansas to
20 get her out of the area. She just has returned
21 and she has got a spot on her colon, very similar
22 to what this pastor before us, and so, I am at a
23 position now that I have to choose whether I will
remain in the city and in Niagara Falls or if I

1 will leave the city because these problems are
2 existing in my home.

3 A lady had a miscarriage in our church
4 in the last six months and there was another lady,
5 she became pregnant and she stopped teaching class
6 after a few months and she had a baby that was
7 born and had an irregular heartbeat.

8 Okay. If we were allowed to leave if we
9 wanted to or to stay if we wanted to, it wouldn't
10 be a special problem but since we are being forced
11 to stay, it addresses the issue in our mind that
12 they are working on that problem, they don't care
13 if our business goes down the drain while they
14 spend working on this project and we feel that
15 even if it does---these problems are not related
16 to Love Canal, that while you are sitting on it,
17 anybody that desires to get out of this community,
18 that you can allow them to get out of it. So, you
19 can study it for one hundred years if you desire
20 to so that you can make sure that everything is
21 safe and these are the special problems that I am
22 addressing and that concerns me and I would like
23 to get a little input from the people that are
here.

CHAIRMAN AXELROD: Well, I grieve with
1 you here about the illness of your pastor and
2 indeed of your wife and others who unfortunately
3 have had a series of medical problems. On the
4 other hand, I would not want to suggest that there
5 is necessarily a causal relationship between their
6 illnesses and the problems that we have previously
7 identified at the Love Canal and I certainly can
8 understand your concern and I understand the kinds
9 of anxieties that are generated by the history of
10 the Love Canal. On the other hand, when you say
11 you want us to tell you that it is safe, unfor-
12 tunately, that is not something I can tell you,
13 nor is it something that anyone else can tell you
14 either. I think that all of us who have been
15 involved in the process of determining the level
16 of risk associated with being in any one place at
17 any particular time are always faced with a
18 definition of what that risk might be and safety
19 is simply a determination of what is an acceptable
20 risk at any given period of time and that is not a
21 scientific decision, but rather a societal decision.
22 And that goes to your other question and that is,
23 the determination that the legislature has made

1 with respect to the extent to which there is a
2 buy-out of property or the potential for individuals
3 to leave the given area. There has been a social-
4 tal determination in effect that the risks associ-
5 ated, the excess risks associated with the proximity
6 to the Love Canal have been somehow bounded by the
7 determination by the legislature as to what would
8 be covered in terms of the declaration area.

9 Now, I am not suggesting to you that it
10 is right or that it is wrong, but that happens to
11 be the way in which the social process has worked.
12 The legislature has made its determination as to
13 what is the area at which there is the availability
14 of funds for the purchase of homes and other
15 activities within that area. But, I think that
16 it is unfortunate that those illnesses that you
17 have described exist. On the other hand, I can't
18 tell you that necessarily they are causally
19 related to the proximity to the Love Canal.

20 So, I guess I can't offer you any
21 immediate relief except to assure you that this
22 panel, this group of individuals who are assembled
23 here, are attempting to grapple with the extent to
which risks occur to individuals outside of the

1 declaration zone as well as within the declaration
2 zone. On the other hand, I don't think that
3 there is anyone on this panel who is going to tell
4 you that anything is safe. It is not a term that
5 those of us who deal with scientific problems are
6 going to address because safety is something that
7 differs for different people and it really relates
8 to a determination of what is an acceptable level
9 of risk.

10 So, I'm afraid I can't answer that part
11 of your question.

12 MS. GABALSKI: Rose Bugman.

13 MS. BUGMAN: Dr. Axelrod, I'm wondering
14 what studies since 1978 have been done to identify
15 health effects in the presence of toxic chemicals
16 and the masses outside of the Love Canal and
17 emergency declaration area bounded by 99th Street
18 on the west and 103rd on the east, and Frontier
19 Avenue on the south and Black Creek on the north
20 and what has been found, if anything. Have
21 periodic evaluations of the situation at Love Canal
22 been made with further additional orders and public
23 health advisories? Have you recommended any in
your supplemental order of 2/18/79?

1 DR. AXELROD: There have been no further
2 advisories or orders that have been issued with
3 respect to the extension of the declaration area.
4 I will ask Dr. Vianna to respond to the question
5 with respect to the additional health effects, any
6 additional health effects that have been identified
7 as to the extension of the studies that were
8 originally initiated in 1978. I think he can
9 generally comment on the qualitative nature of the
10 studies as to whether or not anything beyond that
11 which was originally identified has been seen as
12 a result of the follow-up. Nick?

13 DR. VIANNA: I think you are asking in
14 a sense two questions: What is the status of the
15 study and is there an ongoing monitoring of the
16 Niagara area, if you will.

17 MS. BUGMAN: Yes, for the Department of
18 Health and Dr. Axelrod issued a supplemental order
19 of February 8th, '79 where he felt that the study
20 should have been done to identify health effects
21 and the presence of toxic chemicals in areas out-
22 side of the Love Canal or the declaration area,
23 and I am asking, were these done? Were there
additional health orders and follow-ups published

1 to the people that maybe I am not aware of, and if
2 they weren't, why?

3 DR. VIANNA: There had been no publica-
4 tion. One relates to the Love Canal and that is
5 an extension of the study which you are somewhat
6 familiar with, I am sure. That was to reconstruct
7 the entire Love Canal population, all people who
8 ever lived in the area, that is as to housing.
9 That is in an ongoing fashion and a preliminary
10 indication is that nothing has changed in the way
11 of results as far as adverse pregnancy outcomes,
12 for example, are concerned. That is not a
13 completed study. That is ongoing. It involves
14 literally thousands of more people other than those
15 who were there in 1978. As a result of the Love
16 Canal, the Commissioner has instructed my staff to
17 develop an environmental surveillance program
18 network which basically deals with the creation of
19 a congenital defect registry monitoring low birth
20 weights, and that is being done obviously in a
21 very intensive fashion in highly industrialized
22 areas but it is also being done throughout the
23 state. We are not quite up to par with that.
That is something that is relatively new and it

1 takes time to develop it on stabilization, but
2 that is ongoing. We will be monitoring the
3 environment using those tools.

4 CHAIRMAN AXELROD: There was an exten-
5 sive evaluation of the cancer incidence in the Love
6 Canal area as well as in Niagara Falls, and I think
7 this was published. If you don't have a copy of
8 it, we can provide it to you. This was published
9 in Science in 1981. What it demonstrated was
10 that there was a higher incidence of cancer for
11 the entire City of Niagara Falls but no increase
12 specifically associated with the immediate Love
13 Canal area. So that in evaluating the areas
14 outside of the declaration area, we did find that
15 there was an increased incidence of cancer in the
16 Niagara Falls metropolitan area, the district that
17 is called metropolitan Niagara Falls.

18 MS. BUGMAN: So, you used metropolitan
19 Niagara Falls as a control site for Love Canal, is
20 that it?

21 CHAIRMAN AXELROD: No, we didn't. We
22 looked at---if you look at the information con-
23 tained in the paper, you will see that the rates
of liver cancer, lymphoma and leukemia were

1 evaluated in Love Canal against the City of Niagara
2 Falls and also against the rest of the State of
3 New York and other standard metropolitan areas and
4 what you will find is that the paper provides
5 information to suggest that there is no increase
6 in those specific areas over the rest of New York
7 State but that Niagara Falls, when taken as a
8 group, as a population, as a large population, had
9 a higher incidence of cancer than in comparable
10 areas in New York State.

11 There was no evidence of lung cancer
12 specifically also, which was one of the major
13 areas that was looked at outside of the declara-
14 tion area.

15 MS. BUGMAN: Is there any way we can
16 get a copy of that article?

17 (Handed.)

18 MS. BUGMAN: Thank you.

19 MS. GABALSKI: Violet Iadicicco.

20 MS. IADICICCO: I am pretty much in the
21 same boat as Rev. Dyer. I also have a business.
22 Mine is on the boundary of the declaration area
23 of the Love Canal. The only thing is that I also
have two houses that are rentals that they did not

1 purchase and I am forced to rent and I am also
2 accused of being discriminatory because I won't
3 rent to people with children and I feel that being
4 across the street from the 102nd Street dump and
5 the southern end of the Love Canal, I can't
6 possibly do that. I feel that it borders on child
7 abuse because I don't want to expose them to any-
8 thing that I can't say whether it's there or not
9 and I wonder if they are going to do any study to
10 find out whether the chemicals from 102nd Street
11 dump might partly be what the contamination is.
12 If you are saying it is contaminated in the area
13 and it is not from the Love Canal, possibly it's
14 from the 102nd Street dump because they are just
15 side by side of my property. My property is in
16 the middle of both of them. It's across the
17 street from me.

18 CHAIRMAN AXELROD: I am not going to say
19 very much about the 102nd Street dump for one
20 reason, that is, that there are currently negotia-
21 tions ongoing with the company and there are
22 elements of additional evaluations to determine the
23 extent of migration associated with 102nd Street
dump site and I really don't want to say at this

1 point what is being done, but clearly one of our
2 concerns is the extent to which there may have
3 been or is continuing to be migration from that
4 area, and it is an area of great, intense dis-
5 cussion at the moment. We are concerned about
6 that and I think that your point is a valid one.
7 I don't know what to tell you about whether the
8 migration is coming from 102nd Street or Love Canal.

9 MS. IADICICCO: But I understood that
10 there were funds available but that they are just
11 not freeing them up. I understand that money is
12 there. They are just not letting go of it and I
13 don't know what the reason is. These are houses.
14 They are not just a business.

15 CHAIRMAN AXELROD: This are within the
16 declaration area? These are not within the
17 declaration area.

18 MS. IADICICCO: They are in the declara-
19 tion area. They are on the southern end of the
20 declaration area on Buffalo Avenue and it's right
21 across the street from the 102nd Street dump and
22 they bought my house that I live in and that is
23 exactly next door, which they knocked down about
a month ago. That was with my protest. I didn't

1 want it knocked down until they decided what was
2 wrong.

3 CHAIRMAN AXELROD: I will have to---you
4 are asking me a question and I would have to
5 address that to the Love Canal Revitalization
6 Agency. I don't know the answer to your question.
7 I will raise it with the Love Canal Revitalization
8 Agency because certainly if it is in the declara-
9 tion area, it should have been---you should have
10 been eligible for purchase of your home. That was
11 the original conclusion.

12 MS. IADICICCO: Well, now I have had to
13 hire a lawyer and I am probably going to have to
14 give him a percentage of whatever they do give me
15 for the homes, whatever they do give me for the
16 homes. Now, I have to split with the lawyer.

17 DR. HUFFAKER: There are some constraints
18 on what can be purchased. As you know, if it is
19 commercial property, if it's rental property, if
20 it was absentee landlord, things like that, they
21 weren't eligible for buy-out and this is now being
22 considered by the Congress. We talked about this
23 the last time we met. It was an administrative
problem here that had to be resolved before you

people would be eligible.

1 MS. GABALSKI: Louis Steele.

2 MR. STEELE: My name is Louis Steele.

3 I am an attorney and I represent the Love Canal
4 Renters Association, an organization of individuals
5 including those who live in the LaSalle Develop-
6 ment, to the immediate west of the Love Canal.

7 You indicated that you believe that
8 habitability was to some extent a function of
9 society values and I would like to get a sense of
10 the extent to which that is consistent with what
11 I understand to be the procedure whereby the
12 Commissioner of Health himself will determine the,
13 in the end, whether or not the Love Canal will be
14 habitable. To the extent that you indicated that
15 that would be a societal decision, I am wondering
16 whether or not that is consistent with the way
17 that we have set it up now, which I understand is
18 the Commissioner of Health will make the final
19 habitability decision.

20 CHAIRMAN AXELROD: The Commissioner of
21 Health will make a final decision as to how the
22 criteria are to be applied to habitability.
23 These criteria are being developed through a

1 process that insures that everyone has an oppor-
2 tunity to express his concerns and his recommenda-
3 tions for the way in which those criteria are to
4 be developed. I think ultimately someone has to
5 take those criteria and apply them and since the
6 Commissioner of Health by constitution is responsi-
7 ble for the public health and welfare of the
8 residents of the State of New York under the
9 governor, the executive, then obviously it falls
10 to the Commissioner of Health to ultimately deal
11 with the application of those criteria to the
12 habitability of the individual homes.

13 That isn't saying that anyone is going
14 to be forced into those but it is going to be the
15 applicability of generally consistent criteria
16 that we use for making those kinds of evaluations,
17 wherever it might be, whether it be the Love Canal
18 or elsewhere.

19 MR. STEELE: If I can clear away the
20 verbiage, what I hear you saying is that you
21 indicate from a general policy perspective that
22 society's values would determine habitability. I
23 thought I heard you say that previously but I hear
you saying now that under the particular context

1 that we are working in today, it meant that the
2 Commissioner of Health will make the final habit-
3 ability determination without any input from the
4 legislature. Is that correct?

5 CHAIRMAN AXELROD: That is correct,
6 without input from the legislature unless they
7 communicate to me their concerns. Obviously, any-
8 one can communicate their concerns. I will not
9 be telling people whether or not they should live
10 or not live within those homes but what I will do
11 is apply the criteria against those homes to
12 determine whether or not they are inhabitable
13 based upon the criteria that are developed as a
14 result of the recommendation of this group.

15 MR. STEELE: Well, let me understand
16 then, you will take the recommendations developed
17 by this panel and perhaps a peer review, you will
18 then apply those to the specific facts and
19 circumstances at Love Canal. If you were to find
20 out that a particular area was not habitable, you
21 would not take any action to advise or mandate the
22 people leaving the area, you would only then
23 indicate to them what the results were and let
them do what they might?

1 **CHAIRMAN AXELROD:** I'm not sure what
you mean by "mandate."

2 **MR. STEELE:** Use whatever powers of law
3 or powers of statute or request, whatever appropri-
4 ate emergency powers are needed to enforce upon
5 the situation, the habitability determination.

6 **CHAIRMAN AXELROD:** Well, I am prepared
7 to take the information and provide it to the
8 legislature for their action if indeed it appears
9 that additional legislative action is required, if
10 that is the question you are asking.

11 **MR. STEELE:** If additional legislative
12 action isn't required and if the procedure results
13 in a determination that the area is not "habitable",
14 whatever that means, then you would take appropri-
15 ate steps and actions to rule out continued
16 occupancy of that neighborhood?

17 **CHAIRMAN AXELROD:** Yes.

18 **MR. STEELE:** And if there weren't
19 sufficient statutory authority or if you believed
20 or your counsel indicated to you that there weren't
21 appropriate and necessary statutory authority to
22 make such or take such an action, you would then
23 approach the legislature to request that authority?

CHAIRMAN AXELROD: That is correct.

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MR. STEELE: Second question, you indicated that, I think the phrase was "Everyone would be involved in the habitability process." Do you believe, sir, that it's appropriate for the residents of the declaration area to communicate to the Health Department their feelings with respect to the application of the facts and circumstances of the Love Canal to the habitability criteria? That is, do you believe it appropriate to provide an opportunity for effective citizens to effectively---to give you their views and opinions on the resolution of the habitability project?

CHAIRMAN AXELROD: Yes.

MR. STEELE: I hear what you are saying but I just wanted to be clear about that, that I understand and we don't move too quickly. I am talking about beyond this particular forum, when a decision gets to your office.

CHAIRMAN AXELROD: Yes.

MR. STEELE: Thank you, sir.

MS. GABALSKI: Marie Wozniak.

MS. WOZNIAK: Yes. In your February 8th

1 order of 1979 under your orders and directions,
2 there was to be a continuation to identify which
3 ground water aquifers may have been contaminated
4 by toxic chemicals. Four years later I would
5 like to know, have you identified them? Have you
6 started to? Is it high on your priorities?

7 **CHAIRMAN AXELROD:** Joe, will you answer
8 that?

9 **MR. SLACK:** I have tried to describe the
10 monitoring program that is in place now. Basic-
11 ally it is use of wells within the fenced areas.
12 They are measured monthly for ground water eleva-
13 tion and periodically water quality samples are
14 taken. We have engaged a consultant as to design
15 of a long term monitoring program in both ground
16 water and surface water. That design work is
17 expected to be done in the fall of this year.

18 **MS. WOZNIAK:** Four years later and you
19 have still not identified what aquifers are
20 contaminated. There is no outline or boundary?

21 **MR. SLACK:** We have data that you are
22 welcome to see that describes the ground water
23 quality. There is a great deal of ground water
quality information presented in the EPA monitoring

1 report which I'm sure you have seen and there are
2 conclusions in that report regarding the extent
3 of contamination in the ground water aquifers.

4 MS. WOZNIAK: One question that is very
5 personal to me and I would like to ask, inside
6 the declaration area that is determined and
7 fenced off except for two houses, it has been
8 stated that it is unsafe there, there are high
9 levels of dioxin. Has anyone ever personally
10 sat down, one to one, to those two families and
11 explained the dangers of dioxin and benzine, et
12 cetera?

13 CHAIRMAN AXELROD: I don't know whether
14 anyone has personally sat down. I believe that
15 the Love Canal area Revitalization Agency has
16 addressed those issues.

17 MS. WOZNIAK: But you are the Health
18 Department. You are the Commissioner of Health.
19 Don't you feel a moral obligation to explain to
20 the people if they really don't understand or
21 there is not a full report out, the dangers there
22 are to those things?

23 CHAIRMAN AXELROD: Well, I'm not sure
that I can personally sit down with every resident

and explain it to them.

1 MS. WOZNIAK: But there are only two
2 homes there.

3 CHAIRMAN AXELROD: Let me just finish.
4 I think that there have been agents of the Health
5 Department who have worked closely with the Love
6 Canal area Revitalization Agency. We have
7 indicated the availability of Health Department
8 personnel from our regional office which is
9 located in Buffalo so that if anyone has any
10 questions, they have always been available to
11 respond to those questions and if anyone had any
12 questions, they certainly could have been addressed
13 adequately by the individual.

14 MS. WOZNIAK: But you are not educating
15 the people. They don't know what questions to
16 ask. I mean, that is not the declaration area.
17 That is the area that has been deemed unsafe,
18 contaminated, and yet no one feels the moral
19 obligation to sit down and say, hey, it is
20 dangerous to---I mean, you are the Commissioner
21 of Health.

22 CHAIRMAN AXELROD: My understanding is
23 that all of the people in the area have been fully

1 informed and perhaps not in language that would have
2 been adequate for every individual. My understand-
3 ing was that every individual had been spoken to
4 by persons who were capable of providing that
5 information in language that was understandable
6 so that they understood what the risks were to
7 themselves based upon the information that was
8 available at any given time. I personally have
9 not done that.

10 MS. GABALSKI: Mr. Steele has a follow-
11 up question. However, Sam Giarrizzo has something
12 he would like to say. I would ask him to have the
13 opportunity first.

14 MR. GIARRIZZO: As you all know, my
15 name is Sam Giarrizzo. I still live in the Love
16 Canal area, in the declaration area. I have
17 lived there 28 years and I built my house from the
18 ground up, from the blueprints right up to moving
19 in, and speaking for the rest of the residents
20 here as a spokesman for them, we know how to make
21 up our own minds, to go by your decision and the
22 evidence that they have given us, we will make up
23 our own minds whether we have to stay there or not.
We don't want to be pushed off by outside groups

1 and I believe you gentlemen are intelligent enough
2 to come up with the right decision without being
3 dictated to by politicians or outside residents or
4 environmental groups or anybody who wants to make
5 money off this deal.

6 The residents that remain there are not
7 out to rip off the government. All we want is a
8 safe, sound, unbiased decision, whether it's safe
9 there or not, or to put it bluntly, habitable or
10 not. You people never can say if it's safe, right?

11 CHAIRMAN AXELROD: Right.

12 MR. GIARRIZZO: So, we want a habit-
13 ability decision.

14 CHAIRMAN AXELROD: That is what we are
15 here for.

16 MR. GIARRIZZO: I agree with that but
17 there is a question, how long will it take?

18 CHAIRMAN AXELROD: We have a fairly
19 tight schedule which we are trying to adhere to
20 and that is, that we would like to get recommenda-
21 tions for habitability to be reviewed by the
22 technical advisory group and for additional peer
23 review by the end of the summer so that we are
looking at a fairly short period of time in which

1 these criteria will be developed and will be
2 available for review by everyone. That is not
3 much time.

4 MR. GIARRIZZO: In other words, by the
5 end of the year you should come up with a decision?

6 CHAIRMAN AXELROD: We are hoping for
7 that, yes.

8 MR. GIARRIZZO: And one further question,
9 are you going to decide for the whole area all at
10 once or in sections?

11 CHAIRMAN AXELROD: One at a time.

12 MR. GIARRIZZO: Pardon me?

13 CHAIRMAN AXELROD: One at a time. The
14 habitability criteria will be applied one at a
15 time.

16 MR. GIARRIZZO: What do you mean by one
17 at a time?

18 CHAIRMAN AXELROD: It will be up to
19 each house.

20 MR. GIARRIZZO: Each house.

21 CHAIRMAN AXELROD: Based upon the
22 information that we have.

23 MR. GIARRIZZO: Thank you.

MR. STEELE: I wanted to clearly

1 understand the extent to which Marie's question
2 was answered by Mr. Slack. I understood the
3 intent of Marie's question was to focus on the
4 underground aquifers including those in the bed-
5 rock and I would like to get a sense from Mr.
6 Slack of the extent to which the underground
7 bedrock aquifers have been investigated and when
8 Mr. Slack talks about all of the wells that have
9 been done, is he talking about shallow ground
10 water wells or is he talking about deep bedrock
11 wells?

12 DR. HUFFAKER: E. C. Jordan is going
13 to talk about that very subject next so if you
14 would be a little bit patient, there will be a
15 formal discussion on the geohydrology of the canal
16 area. Would that satisfy you?

17 MR. STEELE: And the second point was,
18 Mr. Slack had indicated a willingness to release
19 all of the data generated by those wells. I
20 would request at this point that the Department
21 of Environmental Conservation release the results
22 of all well data as well as any bedrock comparable
23 data that it may have collected.

MR. SLACK: The data will be available

for your inspection in the Region 9 Office.

1 MS. GABALSKI: There were a couple of
2 additional questions. I don't know if you would
3 like us to save those or whether you still would
4 like to address those?

5 DR. HUFFAKER: Well, we have promised a
6 question and answer session at the end of the day
7 and there may be people who will come later that
8 anticipate having it at that time. I would like
9 to get as much mileage as I can from the panel
10 while they are here. Are the questions that you
11 have from the people who will not be able to stay?

12 REV. DYER: It's just a short question.
13 There is a letter being circulated to the residents
14 that a group is interested in buying out the ones
15 that haven't been bought out. If another group
16 approaches me about buying our property and then
17 you determine it unsafe, should we be trying to
18 sell our properties or are you negotiating with
19 some group to, after you have determined it safe,
20 to sell it out to another group because these
21 letters are being circulated and residents are
22 receiving them. So, I want to know if I am just
23 a pawn of someone else or am I holding my property

1 back and getting nothing for it and then all of
2 a sudden someone is going to buy it, you know,
3 buy the whole group and turn it into a dump or
4 a casino or something or if someone approaches me
5 from the underground or some other place and tries
6 to buy my property, should I sell it?

7 DR. HUFFAKER: I can't even discuss your
8 question. It is something you are going to have
9 to talk to the Revitalization Committee on who
10 does have the authority to purchase. We have no
11 plans and are not involved with anything about
12 resale. I don't know whether anybody is
13 interested in the houses or not and I can't even
14 touch your question. I don't want to either.

15 MS. GABALSKI: Dr. Huffaker, the final
16 question is from Joanne Hale and she said that
17 she would hold.

18 DR. HUFFAKER: Okay, great. Then if we
19 could, the afternoon session, I would like to
20 change the order from what was number two, the
21 discussion of hydrology, to number one, since the
22 people who are going to present have a plane this
23 afternoon and they would like to make their
presentation. So, if the E. C. Jordan representatives

1 would talk to us about the hydrology, this was
2 requested by the panel the last time as one of
3 the areas they wanted further information on.

4 MR. SLACK: Dr. Huffaker, John Sevee
5 from E. C. Jordan will be giving the presentation
6 on the Love Canal, the hydrogeology of the area of
7 Love Canal and I think it would be best if we
8 could go into this room again. He will be using
9 an overhead projector and I believe there is
10 enough chairs for everybody to sit in there.

11 DR. HUFFAKER: Fine.

12 (Whereupon, the proceedings were
13 adjourned to the adjoining room.)

14 MR. SEVEE: All right. Briefly, what
15 I'm going to talk about is to provide a background
16 on the ground water studies that have been done
17 at the site. There were some questions this
18 morning about the aquifers in the area and this
19 may help to clarify those questions. The basis
20 for my discussion is the data base that has been
21 developed through the New York Department of
22 Environmental Conservation, USEPA, borings,
23 monitoring wells, monitoring that has been put in

1 by a variety of investigators. These explorations
2 and field activities have been concentrated
3 principally in the canal area itself, primarily
4 within rings 1 and 2, although there is some
5 additional information within the entire area that
6 is shown on this particular graphic.

7 We have been looking at this information
8 for about a year and a half and have synthesized
9 the available information into a series of figures
10 and graphs which will be available somewhere
11 toward the end of this year, this summer I hope,
12 and I just would like to go through the different
13 geologic formations and how we believe that the
14 ground water is behaving at the site.

15 First of all, the site geology or the
16 soil conditions and rock settings is basically a
17 typical layer cake type geology. It's just a
18 series of horizontal layers down to the rock
19 surface and the rock formations mimic that same
20 type of layer cake formation.

21 The uppermost formation at this site is
22 primarily manmade, man placed deposits. They
23 consist of anything from sandy fill to natural
clay and silty fills. This first graphic here

1 illustrates the thickness of these fills and
2 sandy deposits throughout the site. You will
3 notice that in the area of the canal itself we are
4 ignoring in this graphic the actual amount of
5 material that has been placed in the canal but
6 in the immediate vicinity of the canal, the thick-
7 ness of the materials average around two to four
8 feet. There are other areas throughout the study
9 area where the fill materials are virtually non-
10 existent. This graphic shows that the average
11 thickness again is in the order of a couple of feet.

12 Immediately below the fill is a clay
13 layer. The upper ten feet of that clay layer has
14 been desiccated by natural phenomenon and it has
15 caused it to crack and these cracks tend to be
16 anywhere up to a sixteenth of an inch wide, based
17 on previous investigations. They are sort of a
18 random network of cracks and fissures and again,
19 this thickness of this layer is somewhere in the
20 order of five to ten feet.

21 Below that is a layer of unfractured,
22 intact clay. It's softer. It is not as brittle
23 and friable as the upper portion of the strata
and consequently has a much lower permeability,

1 in other words, much higher, greater resistance
2 for the movement of ground water and in fact,
3 throughout most of the area, it acts as a bottom
4 liner to this whole area and tends to purge the
5 ground water and keep it relatively shallow
6 throughout this entire study area.

7 In the vicinity of the canal itself,
8 the canal is, through a series of references,
9 has been referred to anywhere from twelve to
10 twenty-five feet deep. It seems like a realistic
11 number, if you had to hang your hat on it, would
12 be somewhere around twelve to fourteen feet deep.
13 Consequently, it tends to penetrate through the
14 upper soils, the first layer that I discussed,
15 through the fractured, stiff clay and into the
16 softer clay. Whether it penetrates the soft clay
17 in the area is uncertain. There are no explora-
18 tions within the actual canal area itself.

19 DR. STOLWIJK: Could you tell me what
20 the contour actually represents?

21 MR. SEVEE: Yes. Excuse me. These
22 contours represent the combined thickness of the
23 stiff, fractured clay and the soft clay.

DR. STOLWIJK: That is the combined

depth of the manmade fill and the clay underneath?

1 MR. SEVKE: It does not include the
2 manmade fill. It is just the thickness of the
3 clay soils and in the general area of the canal
4 it tends to be around fifteen to twenty feet deep.

5 DR. POHLAND: How deep is the soft clay
6 layer?

7 MR. SEVKE: From the ground surface,
8 it's in the vicinity of---

9 DR. POHLAND: No, the thickness.

10 MR. SEVKE: The thickness, if you were
11 to take these thicknesses and subtract somewhere
12 in the order of five to ten feet, you would have
13 the thickness of the softer clay.

14 DR. POHLAND: What is it around the
15 canal? Could you give me a range?

16 MR. SEVKE: To do the arithmetic, we
17 have a contour of twenty that meanders through
18 the canal here. So, calling that an average thick-
19 ness of twenty feet in the canal area itself, the
20 thickness of the soft clay is ten to fifteen feet
21 thick and I would put some error bars on that
22 beyond that.

23 DR. STOLWJJK: And below these contours,

immediately below these contours are bedrock?

1 MR. SEVEE: No. Below these contours
2 is a clay till. The clay till is a little more
3 erratic in terms of its surface topography and
4 thicknesses but it does form the next layer in
5 this layer cake geology. The till is basically a
6 granular, rocky, clayey material, a combination of
7 all, virtually all particle sizes of soils and in
8 the canal area itself it tends to average some-
9 where in the neighborhood of two to fifteen feet
10 thick. There is a small area where, in this
11 location, where explorations have indicated that
12 it's only in the order of two feet thick. In
13 terms of its characteristics relative to ground
14 water movement, it's very similar to the soft
15 clay. It has very, very low permeability and we
16 would anticipate similar to the soft clay.

17 Below that is the bedrock surface. The
18 bedrock in this area is a weather dolomite,
19 relatively porous in the upper five to fifteen
20 feet, becoming less fractured and less permeable
21 below that.

22 In the area of the canal itself, it has
23 a generally cellular dipping surface going from

1 an elevation 5 - 50, these are elevation contours
2 of the surface of the dolomite, 5 - 50 here to
3 around 5 - 35 adjacent to the river. So, it's
4 generally sloping to the south.

5 There is some small pumps and troughs
6 and so forth in the surface in the canal itself.
7 These probably existed in other areas, for
8 instance, but here I would anticipate that. It's
9 just that the data was much more complete in the
10 immediate vicinity of the canal and so, these
11 features show up a little bit better.

12 In addition to the natural geology that
13 I just described, there is the manmade fills that
14 I described. All the houses---I shouldn't say all
15 the houses, a large number of the houses in the
16 area that I know of have basements, maybe they
17 all do. Consequently, in the area of the houses,
18 the fractured clays and the fill soils have been
19 excavated out and locally modified geology. They
20 have their utilities throughout this area, sewer
21 lines, storm water sewer lines, sanitary sewer
22 lines, water lines, gas lines, all have locally
23 affected the soil conditions. One interesting
feature is that there was a concern about

1 contaminant movement along the backfill of the
2 sewer lines and utility lines. The only place
3 that we found permeable material that would trans-
4 mit that kind of any significant amount of con-
5 tamination was along Wheatfield Avenue. Generally
6 the utilities appear to be backfilled with a
7 natural silty soil. The ground water movement
8 at the site prior to any remediation, let's
9 talk 1973 or so, there is likely a ground water
10 mound in the area of the canal itself and this
11 caused a surcharging effect in the local area, a
12 surcharging of the waste materials and that forced
13 the materials out into the soil strata.

14 DR. STOLWIJK: What is the significance
15 of the deviation from the rectangle for the canal
16 area here?

17 MR. SEVEK: The deviation from the
18 rectangle?

19 DR. STOLWIJK: I mean, it is given
20 usually in a rectangular shape. This is not
21 rectangular but sort of eaten into.

22 MR. SEVEK: This is based on the EPA
23 studies and their delineations of the configuration
 of the canal.

1 MR. SLACK: Dr. Stolwijk, what that
2 represents is roughly the extent of the area that
3 has been capped and that is somewhat more in the
4 canal itself because it was---we had to go around
5 and in the existing school in the central section
6 and things like that that affected the shape.

7 DR. STOLWIJK: Thank you.

8 MR. SEVKE: Thank you, Joe. So, the
9 surcharging effect caused the migration of chemicals,
10 at least in ground water, and at the same time
11 there was probably some surface water transported,
12 in other words, materials were flowing off of the
13 side. There is documented evidence of ponding at
14 the site and this caused migration into the storm
15 water sewers.

16 The lateral migration occurs through
17 primarily the most permeable units and in this
18 particular case here, the permeable units are
19 fill soils and some natural areas of sand which
20 are generally located about the same elevation as
21 the fill soils and the fractured clay. There is
22 no evidence---

23 DR. STOLWIJK: Can I ask, when they
built the services and cut across the canal as

1 they must have then with the sewers, et cetera,
2 they must have been laid at depths that were
3 substantial, say, six, eight feet or so.

4 MR. SEVEE: Yes, I suppose.

5 DR. STOLWLJK: Are there any records of
6 unusual materials that people excavated or that
7 they were running into in excavating?

8 MR. SEVEE: We didn't find any in our
9 inquiries.

10 MR. SLACK: The only records that I am
11 aware of regarding materials encountered during
12 the placement of utilities were the records kept
13 by the New York State Department of Transportation.
14 May I use this for a minute?

15 MR. SEVEE: Surely.

16 MR. SLACK: There is a four lane highway
17 that runs to the south of the Love Canal, the
18 LaSalle Expressway. When that was built, Frontier
19 Avenue, which runs immediately south of the canal,
20 was relocated and if you have ever driven on
21 Frontier, you will notice there is a weird jog in
22 the street and that jog is a result of the reloca-
23 tion of Frontier. When Frontier was relocated,
it ran across what appears to me to be the very

1 southern end of Love Canal. There is a storm
2 sewer built there and there are records of the
3 wastes encountered during the construction of that
4 road in the DOT journals.

5 DR. STOLWIJK: Thank you.

6 MR. SEVEE: In terms of the ground
7 water movement away from the canal itself, it's
8 going to follow the more permeable strata and the
9 more permeable strata are located near the ground
10 surface. As you go down deeper, up to the rock
11 surface, the materials are less permeable and
12 would tend to prevent ground water movement and
13 basically cause the canal to act more or less as
14 a bathtub. If you look at the current ground
15 water movement around the canal, the underdrain
16 which has been placed within the canal itself or,
17 excuse me, just outside along the boundaries of
18 the canal, has caused the ground water locally
19 within this dotted area to be migrating toward
20 the canal itself and this is not only in the
21 upper strata, this is in all the soil strata.
22 This is not a discussion about the bedrock at
23 this point.

DR. HUFFAKER: Earlier you were talking

1 about the perch water and the ground water. Which
2 way did you say they were moving before remedia-
3 tion?

4 MR. SEVEK: There is no documented
5 evidence, okay. What we speculate is that this
6 area was generally a recharged area, the canal
7 itself, and that migration occurred at more or
8 less radially, accentuated also by the houses with
9 their sumps, basement sumps and so forth located
10 peripherally around the canal that tended to draw
11 the ground water away from the canal towards them.

12 DR. STOLWIJK: There must also have been
13 some difficulties because when sewer lines were
14 drawn across the canal, they would have breached
15 the walls of it and that must have been backfilled
16 with highly permeable material as it usually is.

17 MR. SEVEK: The only place that we
18 found permeable backfill was on Wheatfield Avenue.
19 There was a series of 59 borings that encircled
20 the canal on about 100 foot centers or 200 foot
21 centers.

22 MR. SLACK: Your work?

23 MR. SEVEK: Yes.

MR. SLACK: Yes, about 60 holes, about

200 foot on center.

1 MR. SEVEE: They encountered some of the
2 explorations around for the utilities as well as
3 Malcolm Pirnie did some work and basically the
4 only sewer line that I know of that has permeable
5 backfill is the one on Wheatfield Avenue. That
6 has been cut off, by the way.

7 DR. STOLWJJK: I would suggest if you
8 have 200 foot centers for your borings, the
9 likelihood that you actually would have hit a
10 place where a sewer has been laid or soft backfill
11 put in is very unlikely.

12 DR. HUFFAKER: The Health Department
13 made five transects with a backhoe early on to
14 test the same hypothesis and they found the same
15 thing at Wheatfield and sort of going across this
16 is a lot of junk in the bedding and we didn't see
17 it, and we also made transects across the whole
18 swale area that was located and we did not find
19 migration routes there.

20 MR. SLACK: Plus you have to remember
21 that we trenched around the entire perimeter of
22 the canal and if there were other pipes---

23 DR. HUFFAKER: For your drains, you mean.

1 So, you should have seen these things if they
2 were there.

3 MR. SLACK: Yes.

4 DR. STOLWIJK: Were there records kept
5 of what that transect looked like as you went
6 through?

7 MR. SLACK: I have my own diary of that,
8 yes.

9 DR. STOLWIJK: But I mean, that could be
10 looked up?

11 MR. SLACK: Yes.

12 DR. POHLAND: Did you keep the records,
13 who kept the records?

14 MR. SLACK: I was on site during the
15 construction of just about the entire drain and I
16 have my own observations of what I saw and I was
17 looking for things just like that, how did the
18 stuff escape.

19 DR. POHLAND: So, during the construction
20 of the drain you observed the excavation?

21 MR. SLACK: Not the entire thing. I
22 would say the vast majority of it and I was there
23 when they cut across Wheatfield Avenue, for
example.

1 DR. POHLAND: Did you intentionally
2 observe the areas of sensitivity such as areas
3 where known previous installation such as sewers
4 and utilities and so forth exist?

5 MR. SLACK: No. We had to install the
6 drain beneath this---the sanitary sewer runs
7 across Wheatfield. To my recollection, that is
8 the deepest utility we encountered during the work.
9 That happens to be an area where a lot of fly ash
10 was disposed of so that it is not as permeable as
11 it might have been in other areas of the canal.

12 DR. STOLWIJK: That was, you said, four
13 feet wide?

14 MR. SLACK: No, it wasn't four feet wide,
15 about two or three feet wide and we ran the drain
16 beneath.

17 DR. STOLWIJK: How far down did you go?

18 MR. SLACK: Beneath the sanitary sewer,
19 I would say the approximate depth of the drain
20 there is maybe fifteen or sixteen feet below the
21 previous grade. That is an approximate.

22 DR. STOLWIJK: Well, that would cover
23 any areas, in other words, where there would have
been a substantial breach, you would have observed

that?

1 DR. HUFFAKER: And several houses had
2 drains that dumped everything back towards the
3 canal. So, you cut into the tile of the system.
4 There was a sand lens out in Wheatfield that went
5 clear across the canal and we were able to follow
6 the chemicals.

7 DR. POHLAND: When you were observing
8 the excavation for this peripheral drain, were
9 there any samples taken or was this just a visual
10 assessment?

11 MR. SLACK: It would have just been
12 visual. You mean, were samples of the soil,
13 chemical samples taken and physical testing?

14 DR. POHLAND: Yes.

15 MR. SLACK: No.

16 DR. POHLAND: How did you relate your
17 observations to ingredients, say, from the canal
18 or whatever?

19 MR. SLACK: My observations would be
20 based on the fact that we had conducted a series
21 of borings along the site, along the proposed
22 alignment of the drain and I had a pretty good
23 idea what the undisturbed strata should look like.

1 When we didn't encounter that, it was pretty
2 obvious there had been trenching or some other
3 backfill placed and it was obvious to see the
4 contrast in the soil texture, color and whatever.

5 DR. POHLAND: Okay. When you saw this
6 contrast, was there any attempt to determine what
7 it was?

8 MR. SLACK: Well, in the case of digging
9 across the street, you would normally expect to
10 find pavement, subbase. If there were buried
11 utilities, there was generally disturbed soil
12 placed around the utility as backfill. We looked
13 at the type of fill used to backfill the trench
14 and our general conclusion was they pretty much
15 used what they dug out of the trench to backfill
16 the trench and in the process of doing that, they
17 had homogenized the soil to some extent and the
18 soils are generally quite high in clay content
19 and if you mix them up, the material ended up be-
20 ing fairly low permeability that was used to
21 backfill the trenches.

22 DR. POHLAND: Was there any evidence of
23 translocation of materials from the canal itself?

MR. SLACK: You mean was the material

dug out and put some other place? I can't say.

1 There would be no field evidence of that from what
2 I saw.

3 DR. POHLAND: Just your visual observa-
4 tion.

5 MR. SLACK: Right.

6 DR. STOLWIJK: You didn't observe foreign
7 deposits clearly having migrated through the soils
8 as you trenched through?

9 MR. SLACK: Oh, yes. I mean, often the
10 soil was discolored or there were machines on the
11 soil that was to me evidence of deep migration.

12 DR. STOLWIJK: If they were of any depth
13 at all, they would have come from the canal and on
14 the way through?

15 MR. SLACK: That would be my understand-
16 ing.

17 DR. POHLAND: Was that a uniform distri-
18 bution of migration, did you say?

19 MR. SLACK: No. I wouldn't say that at
20 all. Some areas---well, some of the first holes
21 that were drilled out there were done with, like
22 a tractor mounted post hole digger and you could
23 put two holes relatively close together, one would

1 be bone dry and the other would be wet and during
2 the drain installation we found that also there
3 was quite a bit of variation in the amount of
4 moisture that would seep into the trench during
5 the trench construction from one place to the
6 next, and also because it took a period of time
7 to do it, there were seasonal variations but
8 some of these were wetter than others.

9 DR. POHLAND: Now, two questions. If
10 you saw that kind of migration pattern, was it
11 generally in the direction of flow that has been
12 described to us?

13 MR. SLACK: Well, when we cut a trench,
14 this ground water was in the vicinity of that
15 trench and would tend to enter from both sides of
16 the trench.

17 DR. POHLAND: But you were talking about
18 discoloration, say, along the boring or the
19 trench.

20 MR. SLACK: Right. Would it dominate
21 on one side of the canal to the other?

22 DR. POHLAND: Yes.

23 MR. SLACK: I would have to say that it
was not uniformly distributed along the entire run

1 of the canal. We saw it on both the east side and
2 the west side.

3 DR. POHLAND: So, there was no migra-
4 tion along the---

5 MR. SLACK: I believe John's characteriza-
6 tion of radial flow is probably correct.

7 DR. HUFFAKER: When we were trenching,
8 the friable clay, the upper layers of clay, they
9 were breaking and we frequently looked at those
10 and they had oil in them, a rainbow effect or
11 something of that sort. There were voids in the
12 clay and I recall one we cut into and it had
13 several gallons of baffled fluid out of there.
14 Once you got down into the sticky clay, the thick
15 clay, then it all stopped and when you got further
16 out from the canal, you didn't see this material
17 in the friable clay when you broke it open.

18 DR. POHLAND: And this observation cor-
19 responded pretty well you described with the clay
20 layer, I mean, you saw it in the more permeable
21 layers than in the less permeable?

22 MR. SLACK: Yes.

23 DR. STOLWIJK: And there would not be a
rainbow effect when you got to ten feet down?

1 MR. SLACK: Generally speaking, the
2 depth of the soft clay was around 12 feet. There
3 is a transition I think that may have been start-
4 ing, something like eleven or ten feet below the
5 previously existing grade, but by the time you
6 were, say, twelve or fourteen feet, you were
7 pretty well into that soft clay.

8 DR. POHLAND: And there you didn't see
9 it?

10 MR. SLACK: No. Perhaps near the very
11 top where there might be a route or something
12 that had penetrated at some point in time, but
13 generally the stuff that oozed in the trench would
14 come through the upper soils, the siltier, sandier
15 material, and through cracks in the stiffer clay.

16 DR. STOLWIJK: The trench was dug how
17 far out from the wall again?

18 MR. SLACK: I could only give you a
19 ball park figure there. I don't know of any
20 precise measurements. What we tried to do was, as
21 best as possible, from the historical photos,
22 determine where the canal was. We did some
23 seismic work on the central and northern sectors,
trying to identify the canal, and then we just

1 tried to stay away from it. We did not want to
2 dig into the waste itself.

3 DR. STOLWIJK: You tried to stay ten
4 feet out or something?

5 MR. SLACK: Well, perhaps more than that.

6 MR. SEVEE: The upper soils that we have
7 been discussing are really the area that we are
8 going to be focusing on in terms of the ground
9 water monitoring with the exception of the bedrock.
10 There was a lot of details to that particular part
11 of the geology that I really haven't gotten into.
12 They are very complex and so forth but it is the
13 most important part in terms of trying to monitor
14 the ground water, shallow ground water in the area
15 of the canal, because that has the greater poten-
16 tial of getting into the basements and into the
17 utilities and so forth.

18 DR. STOLWIJK: Can I ask one question?
19 Going back to the deeper layer, is there anything
20 in what you have found or what you have found in
21 digging the trenches that would lead you to believe
22 that in effect the leaching of anything out of the
23 site to places beyond where the trench is is in
 effect being reduced to one hundredth of what it

might have been before?

1 MR. SLACK: There are some monitoring
2 wells there and the existing monitoring wells
3 show that the drain causes flow back towards the
4 main drain areas outside of the canal to a limited
5 extent. There are chemical data. Now, whether
6 you can see any trend in the concentrations, I'm
7 not certain. I can't answer that.

8 DR. STOLWIJK: You are doing that at
9 ground water level essentially?

10 MR. SLACK: We are taking ground water
11 elevations and we are also collecting water samples
12 for chemical analysis, not as frequently as we
13 collect water elevations---

14 DR. STOLWIJK: But the water elevation
15 data indicate a gradient down to the fence?

16 MR. SLACK: In the proximity of the canal,
17 that effect is rather limited.

18 MR. SEVEE: The rates of movement of
19 ground water in the vicinity of the canal itself
20 can be estimated from the work that we have done
21 and for the horizontal movement of ground water,
22 let us say at the time the canal was not remediated,
23 the rate of ground water movement in the shallow

1 zone was probably in the order of one to ten feet
2 per year. So, over the life of the canal, the
3 40 year life of the canal, that could be a sig-
4 nificant distance. There are zones, however, for
5 instance, more permeable sandy zones in the fill
6 and area where it could be as much as ten times
7 greater. A unique characteristic of the fractured
8 clay is that because of the porosity of it, the
9 fractures are so small, that the movement rate
10 through the fractures can be very high and can
11 probably be in the order of ten to one hundred feet
12 per year. So, those units, the fractured clay and
13 the upper fills and sands are important in terms
14 of understanding how the contaminants and ground
15 water are moving in the local vicinity of the site.

16 Currently those rates of movement within
17 this dotted zone are reversed toward the canal and
18 are probably slighter higher than they were before
19 because the gradient at which they are being driven
20 at is greater.

21 The softer clay has vertical permeability
22 that would probably limit the rate of movement
23 downward in the area of a tenth to one foot per
year. So, it's a lot slower downward through that

1 clay area than it is laterally out through the
2 upper zones. Beneath all this we have the upper
3 part of the bedrock. There is a lot of water
4 going through the bedrock because of the high
5 porosity and high permeability.

6 DR. STOLWIJK: The softer clay that you
7 last referred to is actually down at the bottom,
8 just above the bedrock?

9 MR. SEVKE: No. The soft clay is just
10 above the glacial till. Okay.

11 The direction of ground water movement
12 in the bedrock from the data that we have is
13 generally towards west and slightly towards the
14 south in the vicinity of the canal itself. Again,
15 the rates of movement there are extremely high.

16 This is an example of the layer cake
17 geology. Here are the upper materials that we
18 were talking about, the fill, sand, the materials
19 and there is a fractured clay layer in here, the
20 soft clay, the glacial till which is similar to
21 the soft clay and then the dolomite that we were
22 talking about.

23 Again, the direction of movement is
towards the west and towards the southwest in the

1 bedrock. The rate of movement are very high and
2 the wells that are in the rock show some traces
3 of chemicals but it's hard to relate those to the
4 canal. They are in such low quantities and the
5 chances of finding anything in the bedrock are so
6 small because of the dilution effects that we are
7 not really seeing anything.

8 DR. STOLWIJK: These wells have been
9 drilled for monitoring purposes or they were there
10 already?

11 MR. SEVEE: The drills was a part of the
12 investigation of Love Canal.

13 DR. STOLWIJK: And how deep did you
14 go in those wells?

15 MR. SEVEE: The deepest ones are two
16 hundred feet deep I think.

17 MR. SLACK: Yes. Some of the wells
18 penetrated the entire Lockport formation, not very
19 many, I think only four, if I am not mistaken.

20 MR. SEVEE: The principal flow in the
21 bedrock is lateral movement. It really responds
22 not only to the river itself but it responds to
23 the gorge below the Falls and that is why we see
this westerly movement as well as the south,

slightly southerly movement.

1 I guess I covered all of the points and
2 if there is any other question, I would be happy
3 to answer them.

4 DR. HUFFAKER: Did you find in the bed-
5 rock that the water flowed upstream from the canal?

6 MR. SEVEK: I don't specifically
7 remember any. I remember one or two wells that
8 had chemicals in the bedrock and those were very
9 low concentrations. Toluene sticks in my mind at
10 a very low level and I'm not really certain what
11 that value, low value of toluene means.

12 DR. WELTY: You are speaking mostly of
13 the migration of ground water. What about the
14 migration of the organic chemicals that are in the
15 canal? Would that parallel the ground water in
16 terms of rates and so on?

17 MR. SEVEK: The directions of those
18 chemicals would be consistent with the direction of
19 ground water flow and that is why that is so
20 important. The rates at which they would move
21 could be either greater or less than the rates of
22 ground water movement. It could be greater because
23 of effects of this molecular dispersion and

1 mechanical dispersion and they could be slower
2 because some of these compounds have a very high
3 partitioning coefficient and they attach themselves
4 to the soils and effectively hold themselves until
5 the soil is satisfied and then some moves beyond
6 that point and satisfies the next element of soil
7 and that continues on. So, the effective front
8 of that particular contaminant would be slower,
9 apparently slower than the ground water movement.

10 What you see when you review the soil
11 boring data and the ground water data, there is
12 not a lot of consistent patterns. That is one
13 thing that makes things very difficult to analyze.
14 The reason for that is the complexity of the
15 geology and also the complexity of the filling of
16 the canal itself. The ground water movement is
17 relatively easy to understand. It's all the other
18 uncertainties related to where did they put the
19 PMA's in the canal, where did they put something
20 else, and so forth. So, there is not a lot of
21 consistency but what we generally see is that the
22 soils that tend to attenuate themselves on the--
23 excuse me, the contaminants that tend to attenuate
themselves to the soil, stay very close to the

1 canal and as you get farther away, you tend to see
2 the volatile organics which tend to be more mobile
3 in the ground water. So, there is something that
4 is consistent with what you would expect on the
5 site.

6 DR. WELTY: How do you determine that
7 area where the water is now migrating back to the
8 stream, the dotted line? Is that determined just
9 by inference or did you actually measure the
10 movement of the ground water?

11 MR. SEVEE: It's inferred from the water
12 level information. We basically draw a topographic
13 map of the ground water table based on water level
14 in wells and then we put a line through the
15 topographically high area so that on this side of
16 the divide, the ground water is moving this way
17 and on this side it's moving this way. We are
18 currently modifying this picture. We are doing
19 some computer simulations to try to get a better
20 handle on the overall interpretation of this site
21 and we are finding some slight differences in the
22 location of this line itself and this information
23 will be available toward the end of the summer or
the end of the year.

1 DR. POHLAND: Do you have a comment on
2 the graphical outline or the display of any
3 notion of how contaminants have migrated, if at
4 all, beyond the dotted line?

5 MR. SEVEK: That is one of the things
6 that we want the computer simulations to help us
7 assess. What we are trying to do is take a look
8 at what could have possibly happened given the
9 houses that are located around the canal with
10 their basements and underground sumps and so forth
11 and what the setting was like before the canal
12 was remediated with the tile system. The methods
13 that we are using are basically what I have out-
14 lined. We are trying to get an estimate of the
15 direction of the ground water movement and the
16 rates and that is going to tell us.

17 DR. POHLAND: Well, you already men-
18 tioned that you are going to get a differential
19 rate of contaminants per se. What are you using
20 as a tracer for this analysis?

21 MR. SEVEK: The approach that we are
22 going to take is a conservative approach. We are
23 going to assume that the compounds are generally
moving with the ground water, they don't attenuate

1 themselves on the soils and that they diffuse
2 basically at a rate slightly greater than the
3 average ground water movement rate.

4 DR. POHLAND: But you are not making any
5 actual measurements or selection of contaminants
6 that you might more likely or more exactly
7 determine their potential for dispersion or
8 attenuation or whatever the circumstances are?

9 MR. SEVEK: Part of the monitoring pro-
10 gram will be to identify particular compounds
11 based on their mobility and so forth. We have
12 tried to look at the data from that perspective in
13 terms of mobility and their breakdowns. Mobility
14 is just one of the problems you are dealing with.
15 Some of these compounds are attacked by bacteria,
16 they break down, they chemically break down.
17 They chemically break down just because they are
18 unstable structures and so forth. It's hard to
19 get a handle on what compounds to look for.

20 DR. POHLAND: I guess what I am looking
21 for is a worst case situation. I would take one
22 that was highly conservative with regard to any
23 kind of reaction and use it as a surrogate for
the external boundaries of the plume or limits of

the contamination.

1 MR. SEVEK: That is essentially what we
2 are doing. We are looking at the contaminants
3 from the standpoint of allowing them to move with
4 the ground water and diffuse beyond that at a
5 low molecular weight.

6 DR. POHLAND: And you have no feel for
7 what that might look like at this point?

8 MR. SLACK: There is a lot of information,
9 Dr. Pohland; in the EPA monitoring report in 1980
10 they basically said, there appeared to be no
11 chemical contamination attributed to Love Canal
12 outside of ring 1 and we pretty much concentrated
13 our monitoring in the immediate vicinity of the
14 drain because we wanted to make sure that the
15 drain was functioning and that based on the 1980
16 report, it seemed to be pretty much the extent of
17 the through ground migration.

18 We collected additional samples and
19 there was evidence that there were low level
20 concentrations of chemicals further than ring 1.
21 Instead of doing this hit and miss, we thought
22 let's compile the information, simulate like the
23 worst case and then we should have a good starting

1 point for perimeter monitoring programs which is
2 basically what E. S. Jordan is charged with.

3 DR. POHLAND: I guess the reason why I
4 asked the question is that, if indeed we are
5 supposed to come to grips with some kind of
6 habitability criteria, I would like to be informed
7 about as much information regarding what we think
8 may have happened both in the past and now is
9 happening since this, whatever remediation action
10 has been placed into operation.

11 MR. SLACK: I think, Steve, maybe you
12 can correct me, but every agency that is
13 participating in this technical review committee
14 is responsible for giving all their data to
15 CH₂M Hill, that is data that the DEC has regarding
16 ground water elevation, ground water quality has
17 been provided to the TRC. I am certain you may
18 have access to it.

19 DR. POHLAND: Yes. I know you have
20 inundated us with data and I guess what I am
21 searching for is maybe an impression from the
22 people that actually were involved in generating
23 the data and responsive to my question, would you
tell me or at least lead me in the right direction

1 so that I don't spend a lot of time wading through
2 data that is not going to be very productive for
3 me, or at least directing me in such a way that I
4 can confirm what other people are telling me.

5 DR. STOLWIJK: Could I come back for a
6 second to an area that you talked very briefly at
7 the beginning and haven't come back to and that
8 deals with something that pertains to the upper
9 layers. It would appear from everything I have
10 heard and seen that there was migration along the
11 surface over the surface or very close to the
12 surface to the outside of the boundaries of the
13 canal, let's put it this way. You have also
14 indicated that the horizontal migration rate in
15 that layer are higher than the vertical migration
16 rate.

17 MR. SEVER: Yes.

18 DR. STOLWIJK: By a ten to one ratio or
19 something like that.

20 MR. SEVER: Yes.

21 DR. STOLWIJK: What can you tell us about
22 the transport that has taken place and may or may
23 not still be taking place in the first four feet?

MR. SEVER: In terms of what is happening

with the chemical migration?

1 DR. STOLWIJK: Yes.

2 MR. SEVEE: Well, within an approximate
3 area of this boundary here, I would expect that a
4 lot of the contaminants are flushing themselves
5 back toward the canal. We don't have a long data
6 base but I think given a long enough period of
7 time, that could be easily demonstrated. It has
8 been demonstrated on other sites. So, you would
9 see basically a flushing of---

10 DR. STOLWIJK: Within the double dotted
11 line.

12 MR. SEVEE: Within the dotted line. If
13 there is contaminant beyond, let's say this
14 boundary, they would tend to continue on, continue
15 migrating outwards. They would continue breaking
16 down. The bacteria would tend to react with them
17 and they would tend to attenuate themselves on the
18 soil particles. So, the chances or the probability
19 of seeing something well beyond the site are very
20 remote in this particular case.

21 DR. STOLWIJK: Has there been any
22 attempt or any speculation as to the total amount
23 of different contaminants that actually would be

1 harbored in that soil, let's say outside the
2 dotted line? Has anybody ever calculated that?

3 MR. SLACK: If I could give you a course
4 overview in response to Dr. Pohland's question
5 and John---

6 DR. STOLWIJK: Please feel free.

7 MR. SLACK: EPA said in the monitoring
8 report of 1980 that it appeared to them that there
9 were no chemical contaminants applicable to Love
10 Canal outside of ring 1. That applied to bedrock
11 aquifer and it applied to the shallow soil aquifer
12 system. When we designed the remedial program,
13 we proposed to put in a cutoff wall to isolate
14 further the Love Canal and reduce the amount of
15 ground water that enters the canal collection
16 system to reduce the operating cost. We proposed
17 to put that wall in ring 2. Supposedly it was
18 clean. To make sure that was the case, we took a
19 series of soil samples along the wall and in a few
20 areas along the proposed alignment of the wall,
21 which would have been on the west side of 97th
22 Street and the east side of 99th Street, that is
23 on the opposite side of the street from the canal,
we found some chemical contamination in the soils

1 in this area, down here, which wasn't really un-
2 expected because we were so much closer to the
3 canal than we were over here, and I believe up
4 in this area. And on that basis we concluded
5 there might have been more migration than the EPA
6 had found.

6 Generally speaking, that is about it.

7 DR. STOLWIJK: These contaminants were
8 found at what depth?

9 MR. SLACK: These borings were to about
10 fourteen to twenty feet and the soils were
11 analyzed, not the water. We tried to take the
12 sample and it appeared to be the most contaminated
13 or because of the soil texture, it would most
14 likely be the most contaminated. Perhaps John
15 could explain that, the selection process, but
16 basically it appears to me that is my interpreta-
17 tion, that the chemical contamination may have
18 moved further in this corner. Actually that is
19 across the street here. It is south of Frontier
20 Avenue and there might be some up here on this
21 corner up here. Generally, other than that, it's
22 pretty much confined to the area that is fenced
23 as far as I know.

1 DR. POHLAND: Subsequently the wall was
then placed where?

2 MR. SLACK: The wall was deleted because
3 it appeared to be in the wrong spot.

4 DR. POHLAND: I thought you were inform-
5 ing me of something new. You are talking about a
6 wall and I was wondering where that wall came
7 from all of a sudden.

8 MR. SLACK: Okay, excuse me, there was
9 to be a wall. The wall was to be outside and
10 since it did not appear to be outside of the
11 contamination, that was one of the considerations
12 that led to the deletion of the wall.

13 DR. STOLWIJK: So, you took your licks
14 in operating costs?

15 MR. SLACK: Yes.

16 DR. HUFFAKER: We have been hearing
17 about migration from the canal, the mechanism for
18 contamination in the EDA, and we talked last time
19 very briefly about other routes of contamination
20 other than migration, that is actual transport of
21 soil for fill and things of that nature because
22 the kind of monitoring we are doing now will not
23 explain chemicals that we know are there now that

1 are not connected by a plume or something of that
2 sort. So, there obviously are at least two
3 mechanisms that we know are in action.

4 MR. SEVER: Let me just say, in what Joe
5 is saying, just to get into a little bit more
6 detail, I tried to stay general but since you are
7 interested, there is a series of---before the area
8 was touched by man, there was a series of braided
9 stream channels across the site. As the final
10 stages of the glacial lake was weaning, these
11 channels were filled more or less randomly with
12 sandy soils. Consequently we have a series of
13 sandy areas that braid themselves through the site,
14 notably there is an area in the southwesterly
15 corner, there is an area here where we can see the
16 ground water inflection and there is an area that
17 used to hook up with this particular piece there
18 and some minor areas. I think there is one minor
19 one in there.

20 When you look at the soil chemical data
21 and the ground water data, it's consistent with
22 where you would anticipate finding this contamina-
23 tion in these areas.

The other thing I wanted to add is that

1 my own personal feeling is that the possibility
2 of contamination beyond one or two rings of houses
3 is extremely remote because most of these houses
4 had either sumps or where they actually had a sump
5 pit in their basement and they pumped it into the
6 sewer or they actually had an underdrain under the
7 foundation, an underdrain. This would have acted
8 as a very effective barrier for any significant
9 contamination. So, if the first rows of houses
10 didn't get it, the second row probably did. The
11 chances of getting to the third are even more
12 remote. So, the natural setting both of the
13 composite of the man placed setting and the
14 natural setting has lended itself to some control
15 of this site and that is what makes interpretation
16 of these results so difficult, because you get a
17 site out here that has some contamination and it
18 boggles your mind, why is the ground water maybe
19 going the other way? Why do you see that? Every-
20 body knows about sampling error but you can't
21 always explain away the data like that. So, my
22 own personal opinion is that what you will find
23 when you look closer and closer to this thing is
an area of potential impact from the canal itself

1 is very limited with the exception, and I better
2 add this, that during the preremediation days,
3 there was surface transport to the storm sewers.
4 Those storm sewers discharged into Cayuga Creek
5 and we do find some contamination and sediment
6 there. That has also been addressed in the monitor-
7 ing program.

8 DR. MILLER: Excuse me. Do I understand
9 you to be saying that there is little support for
10 the notion that leachate contaminated out as far
11 as 101st to 103rd, down to Frontier, I'm thinking
12 about that out here.

13 MR. SEVEE: Out here? (Indicating)

14 DR. MILLER: 101st and 103rd, down in
15 there, talking about the EDA, right there and up
16 a little further.

17 MR. SEVEE: In this particular area,
18 there was---I haven't looked at the data before the
19 canal's underdrain was put in but it's very possi-
20 ble that there was some migration going in that
21 direction. It is possible there was some migration.

22 DR. MILLER: Prior?

23 MR. SEVEE: Yes.

DR. MILLER: How about migration in the

1 area of the swales that were discussed this
2 morning? How much evidence is there in that
3 regard?

4 MR. SEVEE: Wells that were located in
5 the swales, some of the wells that were located
6 in the swales, I should say, show some degree of
7 impact, which is what you would expect. A lot of
8 the swales are not open ended. In other words,
9 you have a lens of sand that is discontinuous.
10 So, it may get in there and it may want to go
11 someplace but there is nothing driving it. In
12 other words, it's backed up like a bathtub.

13 MR. SLACK: I don't think we are talking
14 about the buried, braided stream channels that
15 were filled naturally by the course of settlement;
16 I believe he is talking about the surface
17 depressions that were filled by man's activities
18 as the area was developed.

19 DR. WELTY: Those areas were felt to be
20 of some importance as wet areas. That is the way
21 they were defined in the health studies that have
22 been done. So, I just wondered what your inter-
23 pretation was of it in terms of the hydrogeology
of those swales and what effect was there when

1 these were filled up with various types of fill-in
2 materials of migration and what other things can
3 you tell us about that?

4 MR. SEVEE: I guess the answer would be
5 the same. The filling in the area is basically
6 random as far as I can tell and the swales, the
7 movement in the swale is limited by the movement
8 in the surrounding material as well. The swales
9 aren't of the form that you have a nice, continuous
10 channel moving throughout that would carry or act
11 as a conduit basically for contamination over
12 great distance. It would still tend to maintain
13 it locally. You may get a little more diffusion
14 with a different pattern of contamination but my
15 gut feeling is that they are not.

16 DR. STOLWIJK: I think the evidence that
17 was gotten from the epidemiological data basically
18 referred to a condition that occurred pre-'78
19 so that it would be a condition of overflow,
20 surface overflow that would find a conduit down
21 the swale and would deposit or carry the stuff
22 relatively quickly and conceivably in high con-
23 centrations. I think that would have been the
theory underlying the hypothesis they tested in

epidemiology. That, of course, is, in other than in general terms, you cannot address that because that condition doesn't exist anymore.

DR. POHLAND: Let me ask one final question. You know, there is always the question of your confidence in your monitoring of the network and to adequately describe the hydrogeological setting. Are you confident that you have adequately done this so that all of these other plans can be supported when the data comes forth?

MR. SEVEE: I knew that question was going to come up.

DR. POHLAND: Well, I figured I might as well ask it before somebody else asks.

MR. SEVEE: I have got a good answer to that. I think as our program evolves, I think we have a good feel for the hydrogeology of the site. I think we understand what the mechanisms of transport are. I think we understand what the important features of the site are and where they are located, i.e.: The sandy areas and so forth.

There is always going to be some level of uncertainty, whether there is another sandy lens here or there or the other thing. We will

1 address that somehow when we design our monitoring
2 network.

3 One of the things that has been suggested
4 to us is to maybe take a look at a problematic
5 type of an approach in addition to just a hydro-
6 geologic approach in terms of locating monitoring
7 wells. I don't know where that would end up but
8 from an engineering standpoint, I think we under-
9 stand the problem. I think there will be a lot of
10 discussions on whether we have got enough wells
11 and so forth.

12 DR. STOLWIJK: You only expect micro-
13 surprises, not macrosurprises.

14 MR. SEVEE: That is correct, right.

15 DR. HUFFAKER: Anymore questions?

16 (No response.)

17 Well, for the last time, we had asked
18 CH₂M Hill to give us the first cut on the data, to
19 give us a rough sort of idea on the kind of
20 material that is available and to send that data
21 list around and now we have a note from Dr. Davis
22 suggesting how she would like to see some of the
23 information presented and she may want to talk to
you about that and you might want to explain how

you prepared the data that was sent out.

1 MR. HOFFMAN: Okay. At our last meeting
2 I described at that point in time the fact that we
3 had transcribed a brief summary of approximately
4 twenty documents to the experts that are here today
5 through Anita, to put it in the Public Affairs
6 Office. The summary consisted of Xerox material
7 from each of those documents. At this point in
8 time we have or sometime later we have another
9 seven documents to provide copies of to you and
10 that pretty well reaches the request that we
11 received at the last meeting, which was twenty-five
12 to thirty documents that contained the most data
13 and to try to supply it to you. And we would like
14 to get some feedback as to whether we met your
15 objectives or not.

16 Now, I will have Martha briefly summarize
17 what this is that we sent and then we will just
18 open it up for questions and comments about what
19 it is that we supplied.

20 MS. MONSERRATE: First, I would like to
21 point out that the data collection effort is ongoing
22 and we don't claim to have every data source on
23 Love Canal yet in our files. We are still working

1 on it but the documents that I did choose to send
2 out to you contain what I thought were the major
3 amounts of data. The purpose of the summary was to
4 give you an idea of what kinds of information was
5 obtained in each of the documents and for that
6 reason I chose to give you basically the cover page
7 describing the title of the data, the author and
8 the source, and perhaps who it was done for, a list
9 of how the Table of Contents lists the figures and
10 some kind of an executive summary, introduction or
11 abstract describing what kind of information was
12 in the document.

12 The types of documents that I chose,
13 again, as I said, were data summaries and I did not
14 include things like critiques and rebuttals except
15 for the OTA report, any auxiliary data, analysis
16 like the environment in Canada, review of the EPA
17 data. They took the EPA data and made their own
18 decisions about the area. I also didn't include
19 remedial plans. There have been several remedial
20 studies that have been done and also QA reports.
21 So, what you have is for the most part the raw
22 data and some interpretation or some of the raw
23 data studies, the preliminary or primary studies

that have been done.

1 I have a list of the documents that I
2 have provided so far and I am prepared to discuss
3 any one of these that I have provided. I also
4 would like some input from you on what you think
5 of what we have provided to you. Is this the
6 kind of thing you are interested in or are there
7 other specific areas that you want to look at.
8 What I have tried to give you so far is just a
9 cross section of all the types of data available.

10 I have got three pages here. That was
11 just the first part of it. Strictly going through,
12 starting out with the health studies, there were
13 two on the cytogenetics, two pregnancy outcome
14 studies which were discussed earlier, growth and
15 health studies that were done by the Environmental
16 Defense Fund in 1981 and Beverly Paigen in '83,
17 blood studies that were done by EPA at Midwest
18 Research Institute and there also have been blood
19 studies done by the Department of Health which are
20 not included here but probably should have been.
21 That is one I just found out about.

22 DR. DAVIS: What was that one, the one
23 you just referred to? When was that done?

1 MS. MONSERRATE: The blood count you are
referring to?

2 DR. DAVIS: Yes, the one you said it's
3 not on this list.

4 MS. MONSERRATE: Right. That was---I'm
5 not really sure when they took the blood samples.
6 Is anybody here from the Department of Health?

7 DR. HUFFAKER: That was all done in '78-
8 '79.

9 MS. MONSERRATE: '78-'79, okay. Other
10 health studies, general health implications and
11 materials found in or associated with Love Canal
12 and which dealt mainly with cancer risks and
13 quantification of those risks, liver function
14 studies, and also one on the use of voles in
15 assessing the hazards that we cited and basically
16 that concludes the health area.

17 In the environment area, we looked at
18 air, soils, ground water, surface water and other
19 environment related studies. Under the air studies,
20 work done by RTI and DOH were both prominent and
21 the environment, the soils area, we have the
22 E. C. Jordan report. It's kind of hard in defining
23 soils and ground water and surface water to get

1 really good differentiation because a lot of
2 these reports included soil descriptions or ground
3 water descriptions, so that they are really in kind
4 of a gray area. We have Earth Dimensions which is
5 a significant amount of work on Love Canal,
6 DOH, work presently going on with E. C. Jordan
7 on ground water, and lastly there is surface water
8 work done by DOH, OH material from Malcolm Pirnie
9 and this comprehensive material which I'm sure
10 you are familiar with.

11 Are there any questions? Some of these
12 that are up here that I have shown you right now
13 are among the seven that will be provided to you
14 today.

15 Dr. Davis, did you have some comments
16 about the summaries that were provided?

17 DR. DAVIS: Not about the summaries but
18 about how they were derived, the listing.

19 MS. MONSERRATE: Okay. Briefly what we
20 have done is to enter most of what we have in our
21 files into a microcomputer and we are attempting
22 to put together a document tracking system which
23 will eventually enable us to get the information
through the use of key words.

1 DR. DAVIS: Yes. I was talking about
2 some additional key words but also in some cases
3 your document file will refer to an illegible copy
4 from Science Magazine and there is no reason for
5 that to be in the file and you could simply get
6 the right copy and retain that, and some of the
7 materials you might want to indicate something about
8 the quality of the data, whether it's peer reviewed,
9 whether that information would be more useful.

10 MS. MONSERRATE: Right. Our initial
11 effort was just to get everything identified. We
12 wanted to know exactly what we had in our files.
13 The next step will be to get back to you and look
14 at it, each of those pieces of information and
15 attach key words and attach some comments to the
16 listing in the computer and then identifying the
17 kinds of data that are included in the body of the
18 document, that type of information.

19 DR. DAVIS: Yes.

20 MS. MONSERRATE: So it's in its infancy
21 but we are working on it.

22 DR. DAVIS: What about confidential,
23 what are these?

MS. MONSERRATE: All right. The DOJ and

1 DOL have identified to us those documents that
2 they consider to be confidential and we are working
3 on getting some of those released for you. As a
4 matter of fact, some of those we will be giving
5 you today that were considered confidential and
6 we are now allowed to release those.

7 DR. DAVIS: I think that there are two
8 different groups of scientists that have been hired
9 by the federal Department of Justice and by the
10 State District Attorney or the Attorney General's
11 Office and each of those is developing litigation
12 and in developing the litigation, they are conduct-
13 ing scientific surveys and investigations into
14 some of the very areas we are interested in and I
15 don't know if there is any way that we could have
16 a confidential session where we would be allowed to
17 review those data, but that may answer some of the
18 questions that we have.

19 MR. HOFFMAN: I think that is an issue
20 that has been addressed at the TRC level between
21 the EPA and the DOJ and the DOL and the DEC. What
22 we are trying to do is, we are trying to identify
23 where those limits are and identify that informa-
tion.

1 DR. DAVIS: It is my understanding from
2 the people that are doing this who I spoke to last
3 week, that they are collecting new data.

4 DR. HUFFAKER: Some new data and also a
5 little regurgitation. I would assume it would be
6 a mixture of the two and if they have the money,
7 they could collect new data. It would be, of course,
8 not very sensible for us to have to try and arrive
9 at criteria without the benefit of what litigants
10 are going to use.

11 MS. MONSERRATE: We have emphasized how
12 important it is for you to have access to all of
13 the Love Canal information and this is a slow
14 process of getting all that released, but we are
15 working on it.

16 DR. STOLWIJK: The most likely outcome
17 of what we would do if in response to one question
18 from anybody we would have to say we did not have
19 access to everything, that would absolutely destroy
20 the credibility of anything we might do.

21 MR. HOFFMAN: I think the question that
22 you need to think about is, do we---it may be
23 necessary to have all that data to apply to their
criteria in the methodology that you develop and

1 that may limit it, but I guess I still feel that
2 you can determine methodology and the criteria
perhaps without having all of the data.

3 DR. STOLWIJK: Well, I feel that we are
4 setting up a criteria that in fact demands that if
5 all the criteria is not available, of course, it
6 is nonsense. On the other hand, the definition of
7 criteria in the absence of some label that could
8 be used in the application of that criteria would
9 also be nonsensical.

10 DR. HUFFAKER: The State Health Depart-
11 ment is very uncomfortable with the project of
12 developing new information under the cover of
13 litigation and so this material is being worked up
14 and we will not have access to it and we are con-
15 cerned about this and we are attempting to approach
16 this problem through channels that are up to us in
17 this matter. I don't know what to say to you
18 other than that right now, as long as it is for
19 litigation, there is nothing that can be done. We
20 feel as you say here, that it has to be done in an
21 open forum or our credibility will suffer.

22 DR. SIPES: When you use the term "new
23 data," what does that mean? Are there people taking

1 more samples and are those samples analyzed or are
2 they looking at monitoring levels or what is it?
3 I don't need to know the new data but what kind of
4 new data?

5 MS. MONSERRATE: Additional sampling has
6 been done.

7 MR. HOFFMAN: I don't think it's something
8 in an entirely different vein and an entirely dif-
9 ferent approach, just probably---

10 DR. SIPES: Well, it could be important.
11 If it's new sampling at this point in time, if it's
12 the same old sampling from before, but if it's new
13 samples that are analyzed or worked up, it probably
14 would be very important. It would be important to
15 what I would want to see done for criteria docu-
16 ments.

17 DR. STOLWIJK: At the very least, if there
18 is some sampling being done along a present protocol
19 that is more applicable to the kind of decisions
20 that we are having to look at, then even the
21 numbers that come out are less important than the
22 fact that sampling along that protocol is available.

23 DR. DAVIS: In the case of sampling of
indoor air, this is very important and I don't know

1 any more details except that they are going to do
2 sampling of the air indoors.

3 MR. HOFFMAN: So, from your perspective,
4 something like protocol information would be help-
5 ful, maybe not absolute numbers.

6 DR. STOLWIJK: That is correct.

7 MS. MONSERRATE: I know that and
8 have been very careful about that.

9 DR. STOLWIJK: If there is a problem
10 about the protocols that are being followed, then
11 the quality of the data that is made available is
12 more important than the actual numbers.

13 UNIDENTIFIED VOICE: As far as the
14 federal government is concerned, there is no new
15 data being taken, data meaning soil samples, air
16 samples, water samples, blood samples. All the
17 federal government is doing is working up data
18 that has already been attained.

19 DR. STOLINE: Are you aware of any
20 longitudinal studies over the time where maybe the
21 monitoring occurred like a month ago and then right
22 now and then it was planned to take samples?

23 MS. MONSERRATE: The DEC monitoring that
is being done is done on a monthly basis.

1 DR. WELTY: That is within the Love
Canal, though, isn't it?

2 MS. MONSERRATE: I'm not sure where if
3 it's located outside of the area.

4 DR. STOLINE: But there are no systematic
5 measurements being made in the EDA, for example?

6 MS. MONSERRATE: You mean soils?

7 DR. STOLINE: That is correct, yes, soils
8 or everything. I mean, is there any systematic,
9 ongoing monitoring at this point that you are aware
10 of?

11 DR. STOLWIJK: I think we were told the
12 monitoring wells are being followed, that the level
13 is measured very regularly and the chemical
14 analyses were made once a month. I think he said
15 that.

16 DR. DAVIS: That is monitoring the ground
17 water.

18 DR. HUFFAKER: There is none as far as
19 air or soils. In some instances you could find
20 in the study in '78 sampling of air and in '80 there
21 was a study and they sampled for eight weeks or so
22 and recorded a series of observations, but that was
23 coincidental when they found it was the same area

by the two agencies at the same time.

1 MR. HOFFMAN: One of our tasks is to
2 ultimately develop a data base management system
3 that will be able to input all this data and then
4 be able to look at a location and say what air
5 samples were taken at this particular location or
6 in a certain geological area and be able to look
7 at that then and determine whether there is some
8 relationships that were established by the fact
9 of somebody did something once there and somebody
10 else did something at another time and, you know,
11 we will try to attach levels of confidence in the
12 data, good data or not. I mean, this kind of
13 product is months and months and months away.

14 DR. STOLWIJK: My experience with the
15 amount of qualifiable overlap between different
16 agencies and different protocols is purely accidental
17 and yields can be very small.

18 DR. DAVIS: There is no ongoing monitor-
19 ing of soil, for example, in the homes that have
20 been destroyed recently. I just drove by one and
21 went to look in the middle, the lower point where
22 the house had been and there was a pool of liquid
23 and it is fair to say it was black, oily gunk and

1 when you stirred it with a stick it made a nice
2 rainbow defraction pattern and it's not a large
3 quantity and I can't tell you whether it was put
4 there by someone dumping out something, although
5 I rather doubt it, but it is there and I wondered
6 if anyone knows what is in it or---

7 MS. MONSERRATE: I am not aware of any
8 ongoing soil sampling programs.

9 DR. STOLWIJK: Well, I, for one, appreci-
10 ate the effort that you have gone into and I think
11 they have been effective in supplying us with an
12 enormous amount of information that we would never
13 have been able to get in any other way.

14 MR. HOFFMAN: I think it would be appro-
15 priate for you to review the list we have given you
16 and if there are other things that you see there
17 that would be of interest---

18 DR. STOLWIJK: It's even useful to see
19 how the computer list actually mentions things that
20 we already have so we can see what kind of conven-
21 tions you use, so that we can interpret the other
22 things better. It's a very useful way of present-
23 ing it and we appreciate it.

MS. MONSERRATE: The lists are getting

1 better all the time to point out the more and more
2 key words and comments to each of those documents.

3 DR. STOLWIJK: Yes. Sometimes these
4 awkward questions we have do have some utility even
5 beyond that.

6 DR. FOHLAND: I think the information
7 should be somehow coded so that it can be connected,
8 meaning, I suspect that you are going to get follow-
9 up information germane to a particular piece of
10 data, whether it's a critique of something but
11 you wouldn't want to transmit it to us but alert
12 us as to where it belongs instead of just an
13 extraneous piece of information.

14 MS. MONSERRATE: That is a separate
15 document, right.

16 MR. HOFFMAN: You will get updates to
17 that list with additional comments and references
18 that this document applies as a critique to
19 document number X.

20 DR. FOHLAND: I would also suggest that
21 you code it in such a way that the numbers are more
22 meaningful than what they happen to be in terms of
23 somebody else's files somewhere. I got confused
on the number 17 name from somebody to somebody.

1 You know, I think for my disorganized mind, I
2 think that it would be helpful if you lined them
3 up for me so that I could immediately determine
4 where subsequent information fits in and where I
5 may in fact may have missed a piece of information.
6 Like, I got duplicate copies of some and on other
7 issues I have missed pages or they are skewed in
8 some way that I got only half of the data and so
9 forth. So, I think what I am suggesting is that
10 maybe there could be some kind of tightening up in
11 the way that you transmit information in such a
12 way that we avoid having to come back to you for
13 clarification.

14 DR. STOLWIJK: After perusing the
15 information, I came reluctantly to the conclusion
16 that the numerical order of these communications,
17 that there is nothing relating number 17 to number
18 18.

19 MS. MONSERRATE: Right. That is a pretty
20 good conclusion.

21 DR. CHALMERS: When are you planning to
22 get the computerized listing out? In other words,
23 when are you going to make the data more usable
to us in preparing our final opinion, because it

1 doesn't sound to me like you are within miles of
2 doing that. If you are going to put all of it in
3 the computer, you could be doing that for years.

4 MR. HOFFMAN: Hopefully not that long.
5 I don't think the data base management system will
6 be up in the way that would be useful to you at all
7 in terms of setting criteria and methodology. It
8 will be up and very useful when it becomes time to
9 apply the data to the criteria and methodology
10 that are developed.

11 DR. CHALMERS: You mean after we have
12 finished our report, you will have some data for us?

13 MR. HOFFMAN: Well, the process that has
14 been envisioned all along was one of criteria and
15 methodology that would be used and compared to the
16 data that exists and then that would determine
17 whether or not the data is sufficient to make a
18 decision or indicates the decision can be made one
19 way or the other.

20 DR. DAVIS: One of the problems we are
21 all troubled by is we don't want to have a situation
22 where we tell you all that we would like to know
23 and learn that it's impossible to find it out or so
expensive to make it impractical or cannot be

1 determined, and that for that reason I think it's
2 extremely important that we, at a minimum, get
3 from the people involved in the litigation at least
4 an inventory of the kinds of information. We don't
5 need to know what but just the types of information
6 that they are obtaining now so that we can know,
7 well, it is possible to have an integrated environ-
8 mental exposure assessment of these things, can it
9 be done and is it possible to determine indoor air
10 levels and changes. Is it possible to do personal
11 monitoring? Can these things be done and if they
12 are, we should then know that they exist and I
13 think that is what bothers a number of us.

14 DR. STOLWIJK: It comes back to what we
15 discussed before. If we are to set up criteria,
16 it's very useful to know whether these need to be
17 or can be generic or should best be generic, in
18 this case they could be quite general or could they
19 be highly specific. They can obviously be highly
20 specific if in fact highly specific information is
21 available to apply them to or align them with.
22 The kind of information that you are gathering for
23 us tells us a little bit now and hopefully more
towards the summer, not all the data that is

1 available and its specificity, but the kind of
2 data that can perhaps be mustered. To the extent
3 that there is data available that could convenient-
4 ly be used, that liberates us in terms of writing
5 criteria that meet that kind of data. If data
6 isn't available, writing that kind of criteria
7 would be a frustrating experience.

8 MS. MONSERRATE: I am hoping that our
9 listing of documentation as we develop it will give
10 you that kind of information.

11 DR. STOLWIJK: The only reason that we
12 are discussing it is so that you have a feeling
13 for what it is we are looking for.

14 MS. MONSERRATE: I understand. I agree.

15 DR. DAVIS: A new topic of interest,
16 there are a number of abandoned sites close to Love
17 Canal at 2nd Street and the S area. I think it
18 would be important to get comparative environmental
19 data that exists, whatever does exist. I think
20 that is important for us to know what does exist
21 and what it shows. There are sporadic reports that
22 in some people's homes that are not in the declara-
23 tion area or are not in the canal, that there is
black gunk coming in. There is a Hyde Park area

1 that would be, I think, important to know what the
2 dimensions of the problem are and in other area
3 neighborhoods as well, because we may be faced with
4 this situation where naively we might recommend
5 making Love Canal cleaner than any other place
6 around it and this requires getting more informa-
7 tion about what is going on in these other areas.
8 It seems, as I recollect, Dr. Huffaker, when we
9 were on the bus and saw the fence, the fence was
10 put up fairly arbitrarily because it was on that
11 side of the road, right? There wasn't really a
12 scientific reason for putting the fence there and
13 then when you see a church just adjacent and it's
14 extremely hard to rationalize how those decisions
15 were made and then the continuity of them.

15 DR. CHALMERS: You have to be careful.
16 That is not within our charge to determine whether
17 Niagara Falls is habitable or not.

18 DR. DAVIS: You are probably right but
19 on the other hand, the problem for us is precisely
20 that, if we don't know what the common denominator
21 is so that we can speak to the background, it's
22 really hard to have anything intelligent to say.

23 DR. POHLAND: The problem with that kind

1 of an approach, it doesn't have any bounds. You
2 can go on and on and on and I doubt whether
3 CH₂M Hill has it within their ability to re-lease
4 the contract but I suspect they have certain limits
5 on what they can do and so forth. So, we have to
6 be careful that we don't trap ourselves in this
7 process. We will find out that we want to find
8 out all similar sites throughout the nation, for
9 instance, that we would like to compare to. Now,
10 in concept, I think it's okay, but I doubt whether
11 they can do a lot toward developing a lot of
12 specific data with regard to that issue.

13 DR. DAVIS: Right. I'm sorry, I didn't
14 mean to imply a lot of specific data. I just would
15 like a general idea of what is going on in
16 relevant areas and perhaps maybe you have some
17 suggestions as to what that would be.

18 DR. POHLAND: Yes. I can see the logic
19 behind recognizing that in fact Love Canal isn't
20 the only source of contamination in the area and
21 certainly, particularly, I have heard a lot about
22 measuring air. Well, the problem with the air
23 environment is that it's not bound by water and
soil. It kind of tends to disperse itself and I

1 suspect that that would cause a very great difficul-
2 ty in putting up that fence, an air fence, between
3 what we are concerned with in the Love Canal and
4 what is outside of that fenced area in the Niagara
5 area. So, I think it's important to recognize that
6 in fact this is a totally impacted area but if we
7 are not careful, we are going to get ourselves
8 involved in issues that there is no way in the
9 world within the constraints upon us, that we are
10 going to deal with those issues and I just know how
11 consulting engineering firms work. So, in general
12 they contract for a certain piece of the action
13 and that is what they will do.

14 So, I must say that we have our hands
15 full right now just dealing with Love Canal. There
16 is a lot of information that we still need to get
17 from the parties that were involved and assimilating
18 all that information is a big job in itself,
19 although, as you say, it may be possible in a
20 general sense.

21 DR. DAVIS: Just a general indication.
22 I think that would be helpful.

23 DR. POHLAND: Certainly if you uncover
that kind of information in the process of

acquiring that data.

1 MS. MONSERRATE: Yes. We could provide
2 you with that information.

3 DR. HUFFAKER: Some of the stuff you
4 have been supplied before, the EPA study and
5 Research Triangle, and there are a couple of docu-
6 ments there, big, thick ones, one is 400 pages and
7 another 100, where they talk about qualitative,
8 quantitative measurements all over the United
9 States in ambient air, measurements in blood,
10 urine, and so on. This is usually around industrial
11 areas and so forth and sometimes in relation to
12 smog and other things, and some of it is for
13 Niagara Falls specifically, which would provide
14 some background information as to what you are in
15 here.

16 DR. DAVIS: I would like to see that.
17 That is Volumes 3 and 4, is it?

18 DR. HUFFAKER: No. That is separate.
19 It had nothing to do with that per se. That was
20 background informationwide. I will have to look
21 in the other room.

22 DR. POHLAND: I think, again, we have
23 got to be careful we don't presume to have a charge

1 to make the decision on habitability. As I
2 understand our charges, we are supposed to come up
3 with the protocol and criteria from which others
4 make the decision. So, say we come up with a
5 conclusion that in fact the only way this can be
6 done is that the data from Love Canal must be
7 compared with similar non-contaminated areas of
8 this kind of configuration, that would be a
9 criterion that we could establish but I think the
10 actual mechanics of doing it and deriving some
11 kind of decision related to that particular
12 strategy would be outside the purview of our charge,
13 as I understand it.

14 MS. MONSERRATE: I would like to point
15 out that I have copies of each one of these docu-
16 ments here so at any time today or tomorrow that
17 you would like to look at the complete universe
18 of what the documents are, I can provide you with
19 a summary now and you are welcome to do that and
20 also make a copy and send it.

21 DR. POHLAND: I have a question that
22 relates to that. I notice that as you correctly
23 indicated as to some of the documents, they were
only introduced to us at least from your activity

1 with regard to the abstract or the summary and the
2 table of contents and maybe some data, now, this
3 morning. However, you have actually discussed
4 elements of, say, Volumes 2 and 3 of the EPA study.
5 Now, I am wondering whether that makes it necessary
6 for us to have access to those volumes?

7 DR. DAVIS: Maybe you need access to
8 those volumes because in fact when I was trying to
9 go through the Pirnie report I was thinking, boy,
10 I imagine someone like Fred Pohland would understand
11 this a lot better. It is tough going.

12 DR. POHLAND: I am not inviting that
13 upon myself.

14 DR. DAVIS: I would like to hear your
15 views on it.

16 DR. POHLAND: I think the problem that
17 comes about then is that if indeed one of the
18 arguments or criticisms of the interpretation of
19 the data which inevitably in my mind is going to be
20 the basis of the final decision are to be considered
21 in our development of the criteria, then I am
22 wondering whether it is suffice for us to only hear
23 the critique of the data or whether indeed we ought
to couple with that our own scrutiny and perusal of

the raw data itself and that is what I am wondering.

1 DR. HUFFAKER: Would you like all three
2 volumes?

3 DR. POHLAND: Well, see, my concern now
4 is a mechanical one in the way that the data was
5 dealt with. Now, I can carry that only so far
6 within my own expertise. It's the way you juggle
7 and message data and come to different kinds of
8 conclusions. In order to actually scrutinize that
9 as my responsibility, obviously, I need to have
10 access to the raw data.

11 DR. DAVIS: And in that context I wanted
12 to ask you, what does it mean when you get a
13 hundredth thousand parts per billion of a pesticide
14 unknown and how do you handle that?

15 DR. POHLAND: I think what you are
16 addressing is, when you look at some of the data,
17 oftentimes the data's analysis, you won't get a
18 complete description of the results that may
19 appear, for instance, on a gas chromatograph,
20 chromatogram or something like that, and this may
21 or may not be significant. My approach to it
22 would be, first of all, to look at the QA/QC
23 procedures which I have been led to believe are

1 pretty good in this proposition. Secondly, I
2 would want to make sure that I wasn't being con-
3 cerned about a peak on a chromatogram that was an
4 internal standard, for instance. Thirdly, I would
5 want to be sure that the peaks that were identified
6 were, in fact, the compounds of concern. So,
7 certainly I would look at the priority pollutants
8 and the different groups and make sure that they
9 were taken care of.

10 Now, the difficulty, of course, that is
11 always encountered even with this mass of data
12 that has already been put in the library for you
13 to use to try to define things, there are many,
14 many different compounds and isomers thereof that
15 haven't been well enough described. So, you are
16 in a complex matrix sample. You will always find
17 things that you can't identify.

18 Now, oftentimes that will lead into a
19 research project of its own. So, that is where
20 you have done the loop, really, in the quality
21 control and quality assurance process, but one of
22 the most critical factors is to make sure that
23 your sample has received the proper treatment prior
to the time that you inject it into the machine

1 in the first place and you know, we are still
2 finding out how to do this. So, I guess I could
3 get excited but on the other hand, knowing how
4 these things come out in mixtures of things, there
5 are oftentimes peaks that you can't identify which
6 may, in the ultimate analysis, be important but
7 at least I would screen against those things that
8 I know should have been there and also those that
9 are also part of the record as compounds of
10 concern, vis-a-vis, the priority pollutants.

11 DR. DAVIS: Now, in that context, the
12 thing that stood out was one hundred thousand ppb
13 of pesticide and the criteria that they gave was
14 that this was not 80 percent pure, they did not
15 identify it.

16 DR. POHLAND: Well, keep in mind the
17 GC Maspec work anyway, you are lucky sometimes when
18 you get 20 percent return on your investment. So,
19 you already have an uncertainty built in. Some
20 are very good. Sometimes you get 80, 85 percent
21 recovery.

22 DR. DAVIS: Would it be possible to go
23 back and identify that sample further or just--

DR. POHLAND: Probably not, without the

1 sample, because it takes very detailed separation
2 procedures which are very time consuming, tedious,
3 expensive and everything else and I don't know,
4 for instance, if they use capillary column analysis
5 and so forth, that is important for the separation
6 process.

7 DR. HUFFAKER: The hotel has asked that
8 we clear out of here, they need the room for
9 another purpose and we have fresh coffee out
10 there if you would like a break.

11 (Whereupon, the above proceedings were
12 adjourned to the adjoining room.)
13

14 DR. HUFFAKER: On the agenda that was
15 offered this morning when you came in, we offered
16 Joe Slack up at this time to discuss any remedial
17 activities that have gone on or monitoring programs
18 or anything relating to the Department of Environ-
19 mental Conservation activities that were left over
20 from last time. If you have any questions for Joe,
21 he is not going to make a presentation but would
22 rather try to answer whatever you may have in his
23 area now.

1 DR. MILLER: It's my understanding that
2 the USDA report found the neighborhood habitable
3 conditional upon certain remedial work being
4 completed and it was also my sense that that
5 remedial work with respect to the storm sewers and
6 the creeks had been mandated much earlier. I am
7 rather curious about why hasn't it been done. Are
8 there obstacles to doing it? There was a reference
9 in one of the documents I read which was sent to
10 us about problems with state of the art technology
11 which caused me to question if in fact the
12 capability existed of responding to that mandate
13 in any productive way. Do you understand what I
14 am saying?

15 MR. SLACK: I don't understand the last
16 thing you said.

17 DR. MILLER: Okay. Well, one of the
18 documents that we received and I should have
19 written down the citation, the USEPA document made
20 reference to the problem of contamination in the
21 sewers and creeks and also made some reference to
22 the technological difficulties in cleaning them up
23 and you used the term "probably the state of the art
technology" and the need to pursue all the

1 technologies, it was a very terse remark and I
2 guess I really have two questions, one is---three
3 questions, has anything been done and if the
4 answer to that is no, why not; and is technology
5 a problem particularly as to the state of the art
6 problem?

6 MR. SLACK: The remedial work for the
7 creeks and sewers is scheduled for 1985 as of this
8 date. The reason it was not done this year is
9 because we just did not do it this year. One of
10 the things that comes out of the Malcolm Pirnie
11 report are a great deal of questions and concerns
12 about the accuracy of the determination of the
13 extent of contamination, the analytical work. The
14 clear recommendation in the Malcolm Pirnie report
15 is to take more samples, better refine the extent
16 to which the creeks should be dredged. That is a
17 recommendation to remove the contaminated sediment,
18 that is, how deep should those materials be
19 excavated and what is the reach of the stream that
20 should be excavated. We plan to engage contractors
21 to do that, collect additional samples and better
22 refine the limits of the work, to prepare bidding
23 documents so that we can bid that job this winter

1 and have a contract in place to do the work in the
2 spring of '85.

3 I have been asked to try to clean the
4 sewers this year and I will try to do that. To my
5 knowledge, there is no problem with technology.

6 DR. MILLER: Thank you.

7 DR. POHLAND: Can I add just a comment
8 to augment what you said? We have two problems
9 really, as I see it, one is a point source problem,
10 kind of a point source problem. The sewers are
11 point sources. They are a contained, adequately
12 described system provided they haven't been breached.
13 Once they are breached and also once the things
14 have been injected into the environment, into the
15 streams and lakes, they are so-called non-point
16 problems. Non-point problems are far more difficult
17 to deal with because you don't have discreet source
18 or boundary ascertainment of where the material is
19 and I think that is what you are groping with now.
20 In the Malcolm Pirnie report they recognize that
21 as a difficulty with regard to remedial action.
22 I got the impression they are not really comfortable
23 with the amount of data that they have but I think
the sewers---

1 MR. SLACK: They are pretty straight-
2 forward. The sewers are relatively straightforward.
3 They will just be cleaned and the trouble in the
4 creeks and the Niagara River is to know the extent
5 of the problem, to better refine the extent of the
6 problem.

7 DR. POHLAND: Kind of like a polluted
8 river that you have been polluting for years and
9 years and years. Somewhere the stuff settled out
10 and contained itself and so forth. Now you are
11 trying to find it.

12 DR. MILLER: But it's rather analogous
13 to the problem of EDA in general, the whole issue
14 of how far the contamination is.

15 DR. POHLAND: Yes, except I see a dif-
16 ference there. I think there is more compelling
17 evidence of the sludges, deposited materials in
18 concentrations migrated through the ground water
19 and so forth.

20 DR. STOLWIJK: Could I ask a question?
21 Joe, you said there was an organized piece of
22 information that you can lay your hands on that
23 tells us what the flow rates have been into the
treatment facility since it has been in operation

as a function of time and season and years?

1 MR. SLACK: Sure.

2 DR. STOLWIJK: And an estimate of the
3 actual toxic materials that have been removed
4 through that stream over a period of time.

5 MR. SLACK: There are good records on
6 flow. You are asking for some estimate of a
7 total mass of chemical and contaminants removed
8 from the leachate. That, I'm not sure.

9 DR. STOLWIJK: Per year or something like
10 that. Are you taking up on hydrocarbons?

11 MR. SLACK: Yes.

12 DR. STOLWIJK: Do you know how much
13 carbon there is?

14 MR. SLACK: Yes.

15 DR. STOLWIJK: Per year or so.

16 MR. SLACK: Yes.

17 DR. STOLWIJK: That would be helpful, in
18 other words, some kind of idea of time frames of
19 what that leachate treatment facility is actually
20 experiencing.

21 DR. POHLAND: Do you have records on the
22 activities at the plant, at the treatment system?

23 MR. SLACK: I don't believe there has

1 ever been a written report on the treatment plant.
2 There are the data that Dr. Stolwijk asked for.

3 DR. POHLAND: This has never been
4 synthesized in any way?

5 MR. SLACK: No. I don't believe a report
6 has ever been prepared or published.

7 DR. STOLWIJK: Anything of that type
8 that establishes the time frames, of course, would
9 be very helpful in an evaluation of the effect of
10 the treatment plant and the whole remediation
11 system.

12 DR. POHLAND: I agree. There is an
13 operational log for that treatment system?

14 MR. SLACK: Yes. There is a daily log
15 maintained by the operators.

16 DR. POHLAND: This includes unusual
17 events, if any?

18 MR. SLACK: I believe, yes. They have
19 daily flow records. They would have records of
20 when carbon was changed out. There would be records
21 of maintenance, repairs made, things of that nature.

22 DR. POHLAND: Would it be appropriate
23 for CH₂M Hill to include that in their task to
accumulate data?

MR. SLACK: I can't answer for CH2M Hill.

1 If you would like to see the flow records or
2 carbon utilisation records, I would be glad to
3 provide that to you.

4 DR. STOLWIJK: Who reviews or audits the
5 operation of the plant?

6 MR. SLACK: The responsibility for the
7 operation and maintenance of the plant is Nick
8 Kojak in the Department of Environmental Conservation.

9 DR. STOLWIJK: Does he have somebody or
10 is there some other agency or somebody that does
11 an inspection of it from time to time?

12 MR. SLACK: I believe that is inspected
13 by people from our Region 9 Office of Hazardous
14 Waste Facilities.

15 DR. STOLWIJK: EPA inspection.

16 MR. SLACK: I'm not certain if the EPA
17 made a field inspection of that plant or not.

18 DR. STOLWIJK: I think it would be
19 appropriate that there be a scheduled and clearly
20 defined responsibility for overview over that
21 plant. I think one of the things that undoubtedly
22 will be an important element in any kind of recom-
23 mendation is that the proper operation and the

1 security of that treatment system be clearly
2 assured and that there be a line of responsibility
3 clearly identified.

4 MR. SLACK: See, the circumstance is some-
5 what peculiar in that the regulatory agency, DEC,
6 is the one that is operating it. So, I would have
7 to assume that they are doing it in conformance
8 with the regulations. Whether EPA has an outside
9 agency inspecting it or not I can't tell you.

10 DR. STOLWIJK: I think we are all familiar
11 with the complexities of the bureaucracy that get
12 involved in these things. I think the important
13 matter is that there be a line of accountability
14 and a line of responsibility that can be clearly
15 identified.

16 MR. SLACK: That I believe exists.

17 DR. STOLWIJK: Okay. Well, that would be
18 nice if we could be given that.

19 DR. POHLAND: Is the plant permitted?

20 MR. SLACK: No, sir. It does not require
21 a permit. It is exempt from record permits because
22 it discharges to a sanitary sewer and it is at the
23 site of generation.

DR. POHLAND: Does it fall under

pretreatment standards?

1 MR. SLACK: It satisfies the city
2 ordinance of discharge into sanitary sewer.

3 DR. POHLAND: Does the city monitor the
4 discharge at all?

5 MR. SLACK: Yes, they do.

6 DR. POHLAND: Could we get that data too?

7 MR. SLACK: I believe so.

8 DR. DAVIS: Isn't part of that in the
9 Malcolm Pirnie report?

10 MR. SLACK: I don't believe so, no.

11 DR. HUFFAKER: Anymore questions of
12 Mr. Slack?

13 (No response.)

14 Well, you had a question this afternoon.
15 We can start our half hour discussion here. Okay.

16 REV. DYER: Okay. All of this ground
17 water that is flowing in, we are sitting right on
18 the fence. We are getting a lot of it coming past
19 our property underneath and if it floods, we have
20 water settling all along that fence and I have
21 called the city plumbing inspectors to come out and
22 other people to come out and look at it and they
23 said---we have got the black stuff coming up in our

1 basement of our home and they said, if you want to
2 live here, you are crazy enough to do it, you know,
3 you don't have to live here because you are a
4 commercial property so you can just lose all your
5 investment and get out and I am just wondering, we
6 get all kinds of water just laying right there in
7 the yard and with all of that flowing in, you
8 know, there is nothing to keep it from contaminating
9 our property and it looks like it's coming up in
10 different areas. Are we being contaminated above?

11 DR. HUFFAKER: Can you speak to that
12 question? He is saying when it rains, surface
13 contamination, is this bringing material up from
14 the ground or is that flow back to the canal
15 bringing new chemicals he is not exposed to already?

16 MR. SLACK: I have no information that
17 there are chemical contaminants as far out in the
18 canal as your house, other than in the creeks and
19 sewers. That doesn't mean that they aren't there
20 but I have no information that shows that they are
21 there.

22 REV. DYER: You show the dotted line is
23 closer toward the fence so it's not pulling things
underneath my house and in the church?

1 MR. SLACK: Well, the dotted line in that
2 overview attempted to show the possible extent of
3 the influence of the existing drain, that is, a
4 drop of water on the canal side of that dotted line
5 would tend to move toward the canal, and a drop of
6 water that soaks into the ground on the other side
7 of the dotted line would go further away from the
8 canal. That doesn't mean that chemical contaminants
9 from the Love Canal have reached that dotted line.

10 REV. DYER: And it doesn't mean they
11 haven't.

12 MR. SLACK: That is correct.

13 REV. DYER: And that dotted line, is my
14 church and my house inside that dotted line? I
15 guess that is what I am asking because if it's
16 flowing away, then I am not concerned as if there is
17 a possibility of pulling things underneath us.

18 MR. SLACK: I don't know where your
19 church and house sits with respect to the line.
20 If it is---

21 REV. DYER: We are on the corner. We are
22 really not far away from the canal at that point so
23 evidently that leachate system is not very effective
out past there. I know they're out in my yard all

1 the time doing all kinds of tests and I ask them,
2 I said, you know, is there a different air quality
3 different times of the day, and "We have never
4 checked for that." Is there a difference in the
5 air quality if the wind is blowing away or toward
6 us or away, "We never check for that." Is there
7 a difference in air quality whether that day is
8 overcast or sunny, "We never check for that." So,
9 you know, I am sitting there and seeing all this
10 testing and yet they never check for anything
11 that I asked. All these were things that seemed
12 to be very important.

13 DR. DAVIS: Who is doing this testing?
14 Do you know who is doing it?

15 REV. DYER: I really don't. He doesn't
16 really talk much to me.

17 DR. DAVIS: Does anyone here know?

18 DR. HUFFAKER: I would imagine it was
19 one of the various contractors that have been out
20 there for the EPA and DEC.

21 DR. DAVIS: Well, I'm just trying to find
22 out if it was EPA or DEC.

23 MR. SLACK: Was this a fellow in a DEC
truck, green and white truck?

During the remedial work, we had a monitoring program that required that a technician go around and take air quality measurements at specific stations at the perimeter of the site to measure any off-site impacts. That may be the fellow that he is talking about.

DR. DAVIS: Has this been done recently?

REV. DYER: Yes.

MR. SLACK: Was it done during the course of the remedial work?

REV. DYER: This was done as late as several weeks ago.

MR. SLACK: That wasn't our fellow then.

DR. DAVIS: That is what I am trying to find out, who is doing this.

REV. DYER: And then they started going halfway down the middle of the yard and then they were out on the telephone pole beyond the house and I asked the guy a bunch of information and he just said that this was data that they were checking and then when he was talking something about the air standards, you know, they said nothing was dangerous to the community and, of course, my son, he gets out there and was mowing the grass and his

1 legs kept breaking all out so he said, well, maybe
2 he is allergic to something. We sent him away
3 for two weeks to youth camp and he was all cleared
4 up and he went out in the yard again and it hap-
5 pened again. So, we were just concerned because
6 all this time, this stirring up stuff, you know,
7 in the middle of the night they were coming over
8 there at 2 o'clock in the morning and there was
9 work going on and I asked in this meeting, what
10 is going on at 2 o'clock in the morning? I mean,
11 you know, why are you waking us up?

12 DR. DAVIS: Do I understand that there
13 is no one here from the government who knows any-
14 thing about this monitoring that has been going on
15 in the Reverend's back yard, is that correct?

16 REV. DYER: That and my church.

17 DR. DAVIS: By the way, what does this
18 fluid look like, the liquid, the stuff that comes
19 up? Is that water or---

20 REV. DYER: It is kind of a oily thing
21 and it comes up in the basement over at the
22 parsonage and the city inspector came out and he
23 said the only way to eliminate that, he said this
is Love Canal and he said I'm going to condemn your

1 basement of your home. He said, and the only way
2 you could even assist in doing this is to dig a
3 trench all the way around your house and maybe the
4 water would go into it instead of coming up into
5 your house and then have some kind of a pump to
6 carry it into the storm sewer or something else
7 and we moved out rather than spend those thousands
8 of dollars trying to do that, but we are still
9 paying on that house there, still paying the
10 mortgage on it and did I answer your question?

11 DR. DAVIS: I guess so.

12 DR. STOLINE: This incident with your
13 son, now, is that a recent incident?

14 REV. DYER: This was just this last
15 summer.

16 DR. STOLINE: This last summer.

17 REV. DYER: Right. We own the church
18 property and then we bought four lots across the
19 street from the church. We were going to expand
20 the church, build a gym and parking lot and so
21 forth before all this happened. So, if we don't
22 keep it mowed, it becomes a dump. Everybody in
23 the community dumps there. I'm not saying necessari-
ly this community but everybody dumps things on it

1 and there is also, there is a community center
2 there and the people at the community center will
3 migrate into that area and there is some dumping
4 going on. So, rather than have that confusion,
5 we have gone in there and we pay quite a consider-
6 able amount of money to keep that place moved.
7 And my son was doing it, some of the work that
8 was there. So, this year, we don't know whether
9 we want him out there or not.

10 DR. HUFFAKER: Violet?

11 MS. IADICICCO: Mr. Slack, you did men-
12 tion that you found contaminants that you thought
13 came from the Love Canal, out of the area outside
14 of the canal but you weren't sure where the con-
15 taminants came from. Is it possible they were
16 coming from the 102nd Street dump?

17 MR. SLACK: I can't answer about the
18 102nd Street dump, Violet. I can only tell you
19 that the areas that I believe that chemical con-
20 tamination has occurred in is the Love Canal that
21 may have gone outside ring 1, appears to be on
22 the south end, to the west of the south end and on
23 the northeast corner.

MS. IADICICCO: Are you speaking of south

1 of the declaration area or the south end of the
2 canal?

3 MR. SLACK: I'm speaking of the area
4 roughly bounded by that green fence. I'm not
5 talking about the declaration area.

6 MS. IADICICCO: And that was before the
7 LaSalle Arterial, not on the Buffalo Avenue side.

8 MR. SLACK: When we did this perimeter
9 sampling program presentation for the installation
10 of the cutoff wall there, we took soil samples
11 from the sampling equipment parked up on top of
12 the LaSalle Expressway and the embankment and that
13 was as far south as we went and that is further
14 south of the fence.

15 MS. IADICICCO: Then you don't really
16 know if there are some contaminants involved in
17 that area.

18 MR. SLACK: We have not traced that out,
19 that is correct.

20 MS. IADICICCO: Even though it's part of
21 the declaration area.

22 MR. SLACK: The DEC did not do that.
23 There may be data in the EPA monitoring study that
provides information on soils or ground water

1 quality further south than LaSalle but I'm not
2 personally familiar with it.

3 DR. HUFFAKER: There is an EPA report and
4 also the Health Department sampling in Buffalo.
5 What we did was air samples, where the cafeteria
6 was and the bar there and so on. We got lindane
7 and the EPA did some manholes and some soil borings
8 down there and they found low levels of material
9 and sediment in the manholes as I recall. This
10 is from memory but it was a little bit of stuff but
11 nothing appreciable. Joe was very careful with
12 his language. He said attributable to the canal,
13 migration from the canal and the EPA document,
14 somebody has that down here, talks about low levels,
15 parts per billion. There are all sorts of chemicals
16 in the area a long ways from the canal and it
17 probably goes outside the declaration area and
18 that is different matter and it is not necessarily
19 connected to the migration from the canal. Yes,
20 Doctor.

21 DR. CHALMERS: I think we have to be
22 careful about anecdotes but on the other hand,
23 there are sometimes important clues. If there
really is a basement near the declaration area, not

1 in it, but at least well away from the canal
2 where black stuff is oozing in still and is in the
3 basement of the house that has just been torn down,
4 can't we get a sample of that and analyze it and
5 if it has a lot of Love Canal chemicals, we can
6 all go home.

7 DR. DAVIS: Yes.

8 DR. CHALMERS: In other words, if there
9 really is an active place in a way out area that
10 is supposed to be now clean, that is oozing toxic
11 chemicals---

12 DR. WELTY: We still don't know how it
13 got there. It could have been a dump truck.

14 DR. DAVIS: Well, yes, but---maybe so,
15 but I think the way to do it is to monitor not
16 one place but a couple of places.

17 DR. CHALMERS: Then you would have to
18 look at some other places but in actuality, what
19 mechanism does this committee have to call on in
20 the way of active chemical analysis unit which
21 would begin to follow up some of these clues and
22 let us know what they find?

23 DR. HUFFAKER: This is an important
question.

1 DR. POHLAND: Let me follow up on that.
2 What kind of program exists now with regard to a
3 response to what I perceive to be a kind of con-
4 tinuous procession of comments like this regarding
5 the appearance of suspicious materials in the area?
6 Is there any kind of manner in which questions like
7 these are being responded to, sampling done or
8 whatever?

9 MR. SLACK: On a case by case basis,
10 samples are collected and analyzed.

11 DR. DAVIS: Okay. Is this dissertation
12 here about his problems sufficient to mobilize
13 such a sampling activity?

14 MR. SLACK: Yes.

15 DR. POHLAND: And you could report to us
16 before the next meeting?

17 MR. SLACK: If I can get the analytical
18 work done before the next meeting, I would be glad
19 to give you a report.

20 DR. POHLAND: I guess what I am making
21 a plea for is that it appears to me that since
22 '78, most of the activity has been initiated in a
23 reactive fashion and I am wondering whether it isn't
time to be a little more proactive, knowing what we

1 know about the area. There are obviously sensitive
2 issues and areas in this EDA particularly and I
3 think that I would---if I were in your position,
4 be a lot more comfortable about my stand on this
5 if I had this kind of continuing input.

6 DR. HUFFAKER: We just had an exchange
7 with Mr. Steele here over monitoring one of the
8 houses being used as an office by the DEC and we
9 can monitor and will monitor that house against
10 OSHA standards because it is being used as a work
11 place and office and as you know, there are no
12 standards for habitability in a residence such as
13 a residence house. So, if we go into the
14 Reverend's house and monitor, we are going to
15 generate some data and my question to you is,
16 what do we do with that data? How do we interpret
17 it?

18 DR. POHLAND: I'm not going to go so far
19 as to suggest in-house monitoring. If you want to
20 take on that task, that is another issue. What
21 I'm saying is, potentially canal oriented migration
22 of material. Now, I would think that the first
23 level of attack would therefore be perceived
incidents per oily puddles or whatever it is.

DR. DAVIS: Well, I can identify it.

1 If you go east on Colvin Street and you go south
2 to 101st in that block, the first vacant lot on
3 the left. Right now, unless it rains this evening,
4 it's completely dry, crumbled up ground and in the
5 center where it appears to be the basement part of
6 the house but just judging by the excavation, there
7 are three pools of water and one of them looks
8 just sort of like water and the largest one has a
9 blacky slick which when I stirred it with a stick
10 refracted different colors and I did not smell it.

11 DR. HUFFAKER: Let me come back to my
12 problem because this is a very real problem. We
13 go into every basement and we do a scraping and
14 not an air sample or something, take it back to
15 the laboratory and it falls into the rough
16 classification of non-aqueous liquid phase material
17 which we see from the canal. What do we tell him
18 and what recourse does he have?

19 DR. FOHLAND: I would suggest that you
20 stay out of people's homes. Personally, I wouldn't
21 want to take that on at this stage of the game
22 unless I had compelling reasons to believe that
23 that would do me some good. Now, the problem with

1 going into people's homes is that you are at the
2 mercy of whatever they might do consciously or
3 unconsciously, meaning that if I knew this mucky
4 puddle was sitting outside which was suspicious of
5 having---I would go and tromp around in that with
6 a pair of boots and carry it down into my basement
7 if I were trying to prove that the same damn stuff
8 was in my basement. So, I don't want to trap us
9 into that kind of behavioral science so to speak,
10 intentionally or otherwise.

11 What I am saying is that if indeed there
12 is sufficient suspicion that maybe there are some
13 areas in the EDA that should be re-analyzed, giving
14 us some time frame information with regard to the
15 initial decision on where this dotted line was,
16 then I think that might be productive.

17 Now, there may be all kinds of arguments
18 against this approach that I don't know about that
19 you probably know about within the confines of your
20 mission.

21 MR. SLACK: I would like to respond to
22 that. First of all, I'm not clear now whether you
23 want us to take a sample out of the basement or
not.

DR. POHLAND: I don't.

DR. DAVIS: I do.

DR. POHLAND: Not first, at least.

DR. DAVIS: But I would say this, random sampling is best and so, if you are going to sample his basement, you have to figure out some random sampling.

MR. SLACK: Then I agree. I believe the statement was made, let's not react, let's take a rational approach to the situation. I believe that as a logical result of your panel's deliberation, that we will come up with a need for more environmental quality data. It's planned by the DEC to, first of all, design a monitoring program which may result in a logical first line of collection of additional environmental quality sampling. It's likely as a result of your work that you may be able to come up with criteria that we could judge samples that we collect against and I think that the sampling program that we have planned to conduct in the spring of 1985 is timely and will follow the design of a monitoring program, will follow your deliberations where you may come up with criteria, where you may come up with chemicals

1 that are of particular concern so that we know
2 what we are looking for, and I think a sampling
3 program at that time is a well spent effort.

4 DR. POHLAND: I don't disagree with that
5 but what I want to know and have heard you say is
6 that you are taking monthly ground water samples.

7 MR. SLACK: No, sir. I didn't say that.
8 I said monthly water elevations, periodic ground
9 water quality samples.

10 DR. DAVIS: Periodically. Maybe I ought
11 to ask you how periodically it is.

12 MR. SLACK: It varies, perhaps once
13 every three months or once every six months in a
14 selected group of wells.

15 DR. POHLAND: When is your next scheduled
16 sampling for ground water?

17 MR. SLACK: We just completed it so I
18 would say another three months from now.

19 DR. POHLAND: I would say, I was leading
20 up obviously to the point that the next time you
21 take a ground water sample, go out to these other
22 spots and grab a sample.

23 DR. CHALMERS: I don't understand how a
sampling in the spring of '85 can be timely with our

1 committee meeting in the spring of '84 and with
2 Item C on our letter of March 20th suggesting that
3 the comparison levels of chemicals in the emergency
4 declaration areas with chemicals in inhabited areas,
5 is that something planned to be done in '85?

6 DR. HUFFAKER: No. That was a suggestion
7 the panel made as one method.

8 DR. CHALMERS: Yes. But would that be
9 done in '85?

10 DR. HUFFAKER: No, no time limit on it,
11 just a suggestion, one way of measuring the
12 effectiveness of the remediation.

13 DR. CHALMERS: Well, somebody is going
14 to have to make a decision about habitability and
15 everybody sort of agreed that was the kind of
16 information on which the decision on habitability
17 would be based by somebody and therefore this
18 committee, seems to me, ought to discuss when that
19 data might be gathered.

20 DR. HUFFAKER: I think that would be
21 appropriate. If it's decided that we are going to
22 do serial sampling and this is something that the
23 panel wants, this is the way to go on that, then
you should design such a sampling plan and implement

it. I think that is an option.

1 MR. SLACK: I think there is a misunder-
2 standing here and perhaps it's my misunderstanding,
3 but I understood the panel was charged with coming
4 up with a criteria or a mechanism of establishing
5 habitability, a scheme, if you will. If that
6 scheme were to involve comparison of environmental
7 quality data, to me it is logical to go out and
8 collect the data that you identify as necessary to
9 determine whether an area is habitable after you
10 have done your work. That is why I think the
11 sampling program would logically follow your efforts.

12 DR. POHLAND: Let me respond to that,
13 also implicit in this strategy and as I thought I
14 described the same kind of charges you have
15 reiterated here, is an understanding that certain
16 other things would be subordinate to that plan,
17 meaning such things as monitoring and so forth.
18 So, I guess in this evaluation we will also be
19 making a judgment on the likelihood of a very
20 timely and responsive program to this decision and
21 basically I have come to the conclusion in my own
22 mind just sitting here listening to this interchange
23 that we are really getting down to the proposition

of who is going to pay for the analysis.

1 MR. SLACK: No, not at all.

2 DR. DAVIS: Well then, why don't you do
3 it?

4 MR. SLACK: You mean collecting the
5 samples in the basement? I don't understand.

6 DR. DAVIS: No. We are talking about
7 some kind of selected, stratified cut that would
8 say, are there chemicals from the canal in the
9 declaration area, that is all.

10 DR. HUFFAKER: We can tell you that now,
11 there are, all over the place. The EPA found it
12 down there and we found it in our soil monitoring.
13 It's out there and it's in the parts per billion
14 level and the question is, is it meaningful as far
15 as habitation goes and secondly, remediation. Now,
16 a concern that you are raising is, is the level
17 going down in time and if that is the case, then
18 sequential monitoring is--

19 DR. FOHLAND: And also a judgment on how
20 reliable is the information, the hydrogeological
21 information. If indeed new things are cropping up,
22 if that is, in fact, the case, I'm not saying it
23 is, if it's starting to crop up, then I've got to

1 say to myself, well, the confidence, my confidence
2 level in some of these other things that have been
3 told me either orally or in a written form is being
4 lowered and to safeguard against that, what I am
5 suggesting is that, okay, let's have some confirm-
6 atory data in those instances at least perceived
7 by somebody that might have some impact on my
8 feeling of credibility and confidence in what is
9 going on because my decision with regard to
10 criteria has got to be linked to what is going to
11 happen even in an attitudinal way in the future.

12 DR. HUFFAKER: Would the panel give us
13 something formal they would like to see done that
14 is doable within the time frame we have available
15 to us that would lead to your habitability criteria?

16 DR. POHLAND: The greatest thing for me
17 I think with regard to, for instance, what we heard
18 today about the hydrogeology of the area, would be
19 for somebody to go out and take a sample in this
20 puddle and tell us that there is nothing there.
21 That would sure give me some assurances. Now,
22 however, if all of a sudden we found concentrations
23 higher than ever found before in the EDA, then I
have got to be concerned of maybe some other

1 pathway of contamination that hasn't been hereto-
2 fore described to me.

3 MR. HOFFMAN: My question would be, why
4 doesn't the methodology criteria that you develop
5 indicate that in instances where those kinds of
6 things are found, that that information, environ-
7 mental information be gathered and evaluated before
8 a decision is made on habitability of that particu-
9 lar area?

10 The thing that would happen if you found
11 something in there, you wouldn't know whether it
12 was due to migration from the canal and, therefore,
13 affected by the reliability of the trench and cap
14 and everything, or whether it was something that
15 was deposited in another move, if it was deposited
16 because somebody picked contaminated material up
17 in the canal in the fifties or sixties and moved it
18 over there.

19 DR. DAVIS: No. I think if you saw that
20 site, that possibility, you would recognize that as
21 not possible.

22 DR. HUFFAKER: That really does happen.
23 That did happen.

DR. DAVIS: This particular site, I

1 talked to the guys who excavated it, okay. I went
2 up, like another block or two and there were people
3 working there with no, even awareness of any
4 protective gear or precautions or things they
5 should avoid who were bulldozing a site they had
6 just leveled and I said, "Did you guys knock this
7 one down? Oh, yes, we did." I said, "What about
8 the sump pump?" I said, "Well, did you take any-
9 thing out of the house or where did the house go?
10 Oh, we don't know, you know, it went away." And
11 my concern is as I expressed in my memo, is that
12 the sump pumps would have been pumping residual,
13 all of this stuff out of the house over its entire
14 history and it is conceivable that the sump pumps
15 could be retaining things that are no longer
16 present in any other place and if they are going to
17 take and destroy these homes, then take them off,
18 then you have lost a very valuable piece of
19 information.

20 DR. STOLWIJK: I think, Bob, what I have
21 heard around us is something that goes as follows:
22 We have been given I think a very complete descrip-
23 tion of what the remedial effort has been. We have
been given a complete description of what the

1 hydrogeology looks like and what we now find is
2 something that we can't judge but it looks like
3 what might be an inconvenient outcropping of some-
4 thing that is not consistent with the detail
5 that is pictured, that is painted for us. If the
6 panel collectively gets the impression that there
7 is an unwillingness or a lack of vigor in pursuing
8 leads that might be uncomfortable for the picture
9 as it currently exists, that would not be a happy
10 thought for the panel. We would all get very
11 concerned. Even if it means following some wild
12 leads and eliminating them by vigorously pursuing
13 any problem like this, at least for some time to
14 come, I think that would greatly increase our
15 confidence in the fact that the picture that we
16 have as we are beginning to develop and also would
17 like to be able to accept, in fact is consistent.
18 If there is even the slightest impression that
19 leads our information that looks at all uncomfort-
20 able to that picture and is not being pursued
21 because it looks nonsensical, let's establish it's
22 nonsensicalness and get it out of the way.

23 DR. HUFFAKER: Well, we are, I believe,
one step ahead of where you are and concede that

1 the material is out there. Now, we have no
2 problem with going in and monitoring whatever it is
3 that you would like to have us look at but what we
4 have been saying and what's his name that did the
5 soil borings and the rest of them, that this
6 material is in fill and not all from migration from
7 the canal and we have to separate the two things
8 and we are saying there are chemicals out in the
9 EDA that may be other places and habitability has
10 to consider those when we do it. Now, we can
11 sample and we have already done this. We can make
12 that information available to you and show you
13 what we found when we did soil borings here down
14 six, eight, twelve feet in some places in these
15 yards and I don't think you have that data, but
16 you people have the list of that. That hasn't
17 been produced. It's on computer and we can give
18 you sheets on that if you want to see it and it
19 might be faster than bring back the resampling.
20 We can resample if you would like us to if that
21 would set your mind at ease about what is there.
22 We are not trying to hide anything. We are just
23 saying we know it's there.

DR. STOLINE: I would just like to ask the

Reverend one more question and anybody, really.
1 You have talked about a situation that I would
2 characterize, if true, as somewhat the same as
3 what was the focus of the national media in '75,
4 '76, that type of thing. Is yours an isolated
5 instance? Are you aware of other people that have
6 these types of problems or not? Is yours the only
7 one that you are aware of or are there---I mean,
8 we are talking about yours as a case here but I'm
9 wondering, my question is, are you aware of others
10 or is anybody in this room aware of other situations
11 of people, say, living in the EDA or maybe even
12 possibly a little outside of the EDA where there
13 might be some question of the kind of thing happen-
14 ing with them in their households, businesses,
15 whatever, that you are discussing with us today?

16 REV. DYER: I am not aware of any that is
17 around me. We are in a kind of an isolated area.
18 They stopped, before they got to a vacant lot, they
19 stopped and they took our church and three houses.
20 That is the only thing there and then they left
21 these on that one side, on the east side of the
22 canal and there is a vacant lot on the west side,
23 they could have easily just stopped, you know, went

1 to the vacant lot. Okay, we are getting water
2 setting in there. When it rains, that is when this
3 comes up. If you sample that and it's dry, you
4 are not going to get it, but when it's raining, so
5 I'm saying, if you want to sample it, sample it
6 when I am experiencing the problem, you know, during
7 those particular areas but let's talk to people
8 and there could be others. There is a lot of
9 people that just got discouraged with it that won't
10 even come out for anything because they already
11 know what is going to be done.

12 MS. IADICICCO: There is a Mrs. Roberts
13 that used to live over on Buffalo Avenue and her
14 mother rented, had a rental, did not purchase, and
15 while her mother lived in the rental, it was neces-
16 sary for her to have oxygen on the premises at all
17 times because she was asthmatic and was subject
18 to, you know, not being able to breathe at times
19 and when she left there and went to Niagara
20 Geriatrics and she did not need oxygen any longer.

21 DR. STOLINE: How recent was that?

22 MS. IADICICCO: Not recent. That was
23 back when all of this was---that was before.

DR. DAVIS: The question that is

1 important now is, does anyone now have knowledge
2 of this sort of thing going on now?

3 MR. GIARRIZZO: The Reverend talked about
4 his kid getting rashes and when he went to camp it
5 cleared up and he came back and he got the rash
6 again. Now, he is cutting in the field across from
7 the church, right?

8 REV. DYER: And the church both.

9 MR. GIARRIZZO: And the church, mostly
10 the field.

11 REV. DYER: It's a lawn.

12 MR. GIARRIZZO: Now, that field there,
13 the last 30 years that I have been around that
14 section has had poison ivy. Any kid that has ever
15 played in there always has a rash and that is the
16 answer for your kid getting a rash. Every kid
17 that plays in that field over the years has had
18 poison ivy rashes and if you analyze it, you will
19 find out that is it. Now, there is a lot of kids
20 that got poison ivy and they got away from that
21 field and it cleared up. It had nothing to do with
22 the canal and they---

23 DR. DAVIS: With all due respect, I don't
think that is going to be helpful to what we are

trying to do now.

1 MR. GIARRIZZO: I think it is helpful
2 because he is talking about the field that is
3 away from the canal. Now, I know kids that are
4 right in the canal, right on top of the canal, not
5 the declaration but right on top of the canal, dug
6 these holes that they used to call underground
7 forts, maybe one of you men probably dug it, you
8 know where you dug a hole and cover it up with
9 boards and that is your fort. They did that right
10 in the canal and they never got rashes there but
11 they go and play in the field there and they got
12 the rash.

13 Now, there is another thing, you are
14 talking about sump pumps. Okay. Now, if you take
15 the sample from a pump, you find out what is in the
16 sump pump hole, right? When you got the sump pump,
17 the push rod always sticks. How do you free it?
18 You probably done it, anyone that has a sump pump,
19 you get the WD-40, you get the oil or something and
20 you spray it and it drips down into your water.
21 Some of that residue lays in the water. Now, when
22 you test the water, what do you think you are going
23 to have? Those chemicals and those abrasives are

1 all made out of chemicals. They will lay on the
2 water. So, did those chemicals come from the canal
3 or did they come from the person spraying the sump
4 pump to free it up? That is the question that you
5 people have to answer.

6 DR. DAVIS: We can determine chemically
7 what is in the oil that has been sprayed but I
8 don't think some of the chemicals reported here
9 would be that. There was apparently an EPA monitor-
10 ing of the sump pumps in 1982 and we could ask for
11 the reports of that monitoring and see whether they
12 determined something that would not be in the oil
13 that you are talking about, that might be in the
14 pumps. I think the whole point Dr. Stolwijk was
15 trying to make and I think we can wrap that up is,
16 we would like some showing of good faith of looking
17 at a question such as that and I do think that it's
18 important that good faith be shown.

19 DR. HUFFAKER: We will meet you anywhere
20 you want us to on this. If you would like us to
21 do some sampling, we would like you to help us a
22 little bit on the sampling, give us something
23 firmer than we have now as to what you would like
us to do and we will get it done. Can we work on

that in the morning?

1 Lou has some comments he wanted to make.

2 DR. POHLAND: Well, let me just make one
3 point with regard to that, it would be helpful at
4 least from my perspective to know what this sampling
5 program is all about, the one that is supposed to
6 start in the spring of '85. What I am beginning
7 to sense is that you have got it all up here and
8 it does exist on paper and it would be helpful
9 if we were able to look at it.

10 MR. SLACK: I apologize if you perceive
11 that I am not entirely cooperative in going out
12 and collecting samples in these homes.

13 DR. POHLAND: I was afraid you were
14 reaching that decision.

15 MR. SLACK: I am definitely reaching that
16 conclusion. If I may continue, though, what I
17 hope to do was to learn from the panel as to how
18 the environmental sampling, if that is necessary
19 to help a decision of habitability be reached,
20 can best be performed, what types of media should
21 be sampled, sampling strategy, chemicals that we
22 should look for and perhaps the concentrations at
23 which these chemicals are of concern so that you

1 could design a sampling program that would meet
2 your needs and I think that takes a considerable
3 amount of doing on your part and our part and that
4 is what I hoped we would be able to do by 1985,
5 and I don't think that is being remiss. I think
6 that is fairly optimistic that we have all these
7 things squared away so that all of us can agree on
8 it to go out and do that in the spring of 1985.

9 DR. POHLAND: Okay.

10 MR. SLACK: In the meantime, we would be
11 glad to do what you ask.

12 DR. POHLAND: First of all, I apologize
13 if I contributed to your conclusion about what we
14 were saying. What I am trying to drive at is that
15 I'm trying to avoid the so-called chicken and egg
16 syndrome where you give me this and then I will
17 respond and while I am sitting over there saying
18 you give me this and then I will respond and we
19 just go around in circles. The problem that I have
20 always had with assessment programs, and we are
21 really talking about environmental impact assess-
22 ments, is that we are trying to eventually come to
23 a notion of where we stand and what should be done,
okay, and out of that conglomeration of information

1 which many of you are much closer to than we are,
2 we are trying to get a feeling for what is the
3 existing knowledge of things that we can couple
4 with our own areas of expertise to come to a
5 decision of what must constitute the protocol for
6 arriving at the decision somewhere down the line
7 as to whether that area is habitable.

8 Now, lots of our questions are inten-
9 tionally probing and maybe insulting for which again
10 I apologize, but what I am trying to do is get a
11 feel of what is there and what kind of confidence
12 I can assign to it and it disturbs me when certain
13 things come up that perhaps were or were not
14 addressed and we are getting maybe into the process
15 and maybe because the information isn't there,
16 what appears to be at least evasive answers and
17 you know, that is all I am trying to sort out in
18 my own mind and from my standpoint at least, you
19 can be assured that my contribution to this
20 activity will be one that addresses many of the
21 issues that you probably already have in mind and
22 things that I believe are technically capable of
23 being done and I'm going to try to make an assess-
ment of what is being proposed, but in order to do

that, I need to know what is being proposed.

1 So, I think we can save each of ourselves
2 some time and effort if this kind of information
3 were revealed.

4 DR. STOLINE: I think I would personally
5 like to see some resolution of the issue raised
6 with respect to some of the problems that the
7 Reverend has discussed here. A couple of reasons
8 that I mention this, one is that with respect to
9 some of the problems that we have had in Michigan,
10 it has been essentially one person that has taken
11 the lead with respect to the contamination with
12 that Farm Bureau thing in Michigan with PVB that
13 led to that and as I understand, there is another
14 environmental thing in Maine where it's one person
15 that essentially led into a situation where they
16 discovered that there was some sprays on roads that
17 led to something that was causing some type of
18 health problem. There may be something here and I
19 think that we should maybe explore isolated
20 instances and I want to pick up on one other reason
21 for saying that. If I understood Dr. Axelrod
22 correctly this morning, he was asked how habit-
23 ability decisions were made. He did not rule out

1 necessarily the notion that it would be made house
2 by house or segment by segment and so on. So, I
3 think really a logical extension of what, if I
4 heard him correctly, would be to take a look at
5 these isolated cases. There may be something there
6 and it may be self contained in that area and we
7 can deal with it.

8 DR. HUFFAKER: But you are going to tell
9 us what to look for out there?

10 DR. POHLAND: And we are also going to
11 assign priorities to the things that we think ought
12 to be done and where we assign those priorities
13 likely will be established on the basis of what we
14 hear and what is provided to us to appraise, and
15 all we are doing is soliciting as much of this kind
16 of input as possible. I am getting a bit of a
17 feeling that we are getting all the published
18 literature but outside of the nonpublished things
19 that we talked about this morning, we are not being
20 involved in the active process of monitoring and
21 those kinds of data that apparently exist somewhere,
22 and we should be able to access it.

23 MR. SLACK: We have given the TRC all the
data that we have. That was made available to you.

1 We have not withheld a damn thing from you, to my
2 knowledge.

3 DR. HUFFAKER: Why don't we pick this
4 particular problem up in the morning and talk about
5 it over dinner tonight or something and maybe we
6 could get it a little more quickly resolved.
7 Mr. Steele had asked to make a statement. I would
8 like to give him an opportunity to do so.

9 MR. STEELE: Thank you, very much. I
10 just wanted to state on behalf of my clients, the
11 Love Canal Renters Association, I just wanted to
12 toss out for the people here some of the notes that
13 I have been able to take in the course of this
14 afternoon and thoughts that have emerged in my mind
15 of concerns that happened and in my mind I have
16 concentrated basically I think on six different
17 areas and I will go as quickly as I can. I will
18 thank you people very much in the beginning for the
19 opportunity to do this.

20 Point one, I am concerned that material
21 that may be relevant to your work is to some extent
22 being kept confidential from you and I would ask
23 that you do all you think is appropriate to get
this material. I have noticed from listening to the

1 meeting this afternoon that some of that material
2 is apparently going to be made available to you.
3 I would ask that you ask the following three
4 agencies, the New York State Department of Law,
5 the United States Department of Protection Agency,
6 the United States Department of Justice, to
7 itemize for you any relevant documents and data to
8 review that they do not provide for you that you
9 may think relevant. They may give you some informa-
10 tion, they may continue to withhold other informa-
11 tion. I think it's important that you know what
12 is being withheld so you can make a judgment
13 according to your own science on whether or not
14 it's appropriate for them to do that and I can only
15 speak from personal experience with the State of
16 New York and the United States of America, that when
17 they tell you that they have given you everything,
18 you know that they haven't and I am talking about
19 current stuff. So, please ask them whether or not
20 they are telling you about everything that they
21 have and don't just accept silence from them mean-
22 ing that they don't have more. I have learned
23 through litigation that it takes that to find out
all of the documents that they have and that is

from the DEC and it's from the Justice Department.

1 Second point, I would like to apprise
2 the committee of the difficulty that my clients are
3 having in obtaining relevant information. I have
4 fought and my initial conversations with Ms.
5 Colegen had led me to believe that the copies of
6 the different documents that have been made avail-
7 able to you would be made available to my clients
8 for their review and for their reading. I have
9 learned subsequent to that point in time that we
10 could only borrow some of these studies and that
11 copies would not be provided to us unless we were
12 willing to pay, in fact, able to pay, and my clients,
13 many of them are on public assistance and aren't
14 able to pay 25 cents a page for all the material
15 that you people are receiving and this material
16 we do believe is important in this proceeding and
17 we do believe is important to understand. We
18 don't believe borrowing privileges for one or two
19 days is sufficient to provide us with the opportu-
20 nity to fully understand.

21 So, I would like to let you people know
22 that we are having a problem obtaining relevant
23 information from the State of New York and in

particular the New York State Department of Health.

1 Also, I would like to point out that
2 there have been an extraordinarily long turnaround
3 time from making available at the Public Informa-
4 tion Office the correspondence between yourselves
5 and the New York State Department of Health. It
6 wasn't until last Thursday or Friday that I was
7 able to obtain on behalf of my clients a letter
8 that you people sent to Dr. Huffaker several,
9 several weeks ago, and I think that is an incredibly
10 long turnaround time and I would ask that if the
11 committee thinks it appropriate and I am not at
12 this time really going to suggest what is appro-
13 priate behavior on the part of the committee, but
14 if the committee believes that it's appropriate
15 for the public to have copies of documents that it
16 writes to Dr. Huffaker, I would ask that the
17 committee encourage Dr. Huffaker to share that
18 material with the public in a timely way.

19 Dr. Davis mentioned a memorandum that
20 she had prepared and/or circulated with respect to
21 sump pumps. If that document was something that
22 the public was supposed to have access to, I would
23 like Dr. Davis to know that we don't have it and

1 that I can't find it and that it has not yet been
2 provided.

3 DR. HUFFAKER: You got that about two
4 hours ago.

5 DR. DAVIS: I brought it today.

6 MR. STEELE: That is why I said, I don't
7 know.

8 So, the third point, so, the difficulty
9 in communication and again I speak only about the
10 information that I have. The third point and
11 this speaks specifically to what I believe is a
12 very important document and I make reference to the
13 Geo Trans Report that has not been made available
14 to this committee, I understand, and I don't know
15 why that report has not been made available.

16 Let me indicate why I think the document
17 is important and let me go into the parts of the
18 document for you. I think the document provides
19 important information in two respects. It provides
20 information with respect to the adequacy of the
21 current Love Canal remedial efforts and it provides
22 information with respect to the adequacy of the
23 bedrock, ground water, bedrock monitoring. The
final Geo Trans Report dated July 25, 1983 contained

1 two recommendations. It contains fifteen recom-
2 mendations. Recommendations 12 and 15 are as
3 follows, the conclusion 12 is as follows: Installa-
4 tion of a second trench drain instead of a cutoff
5 wall at the location of the proposed wall will
6 better achieve all goals of remedial program except
7 for the objective of reducing long term operating
8 costs associated with handling and treating drain
9 plugs.

10 Apparently there has been some thought
11 given to a wall instead of to a drain. I haven't
12 heard about it until I obtained a copy of the report
13 and I hadn't heard about it being discussed today
14 and it seems to me that it is important for you
15 people to be aware of what somebody thinks and has
16 provided to the Environmental Protection Agency and
17 the DEC that kind of a conclusion.

18 Conclusion number 15 is as follows: A
19 detailed ground water monitoring network to
20 evaluate the entire remedial action program at
21 Love Canal should be designed immediately and
22 installed at the earliest possible date, preferably
23 prior to construction of additional corrective
measures.

1 Now, what concerns me is to compare that
2 with the conclusion that somebody asked, Mr.
3 E. C. Jordan, are you confident about the monitor-
4 ing effort and Mr. E. C. Jordan said I think that
5 we have "a good feel for the hydrogeology of the
6 site and that we understand the problem."

7 Now, when we go back to the Geo Trans
8 Report, we see that it includes the following
9 phrase: It should be noted that the proposed
10 measures are primarily designed to control the
11 migration of contaminants through shallow ground
12 water and to reduce the rates of ground water flow
13 to the trench/drain system. A detailed investiga-
14 tion should be conducted to determine the severity
15 and extent of bedrock contamination at Love Canal.
16 Depending on the results of such a study, addi-
17 tional measures may need to be taken to recover and
18 control the migration of contaminants in the
19 Lockport Dolomite Aquifer.

20 I also would like to refer to a sentence
21 in the draft report, a sentence that was not
22 challenged in the final report: Despite the
23 construction of approximately two hundred ground
water monitoring wells in the vicinity of Love Canal,

1 few reliable aquifer tests have been performed
2 to determine the hydraulic properties of the
3 various geologic units.

4 Now, these documents were prepared some
5 time ago. In the event that these comments are
6 still relevant, it's unclear to me how we can have
7 a good understanding of the problem. So, I just
8 bring that to your attention and ask that you have
9 an opportunity to review it.

10 Point four, again, I do encourage the
11 panel to do what additional sampling that it
12 believes is necessary and appropriate and to do
13 what it believes is necessary and appropriate to
14 obtain confidential data and to understand fully
15 the confidential data and reports and analyses
16 that may still exist.

17 Point five, on behalf of the Renters
18 Association, they have an anecdote as well to
19 recount with respect to migration of chemicals.
20 Several weeks ago I received a call from Sarah
21 Gilbert and she indicated that one of the members
22 of the Renters Association had some black stuff
23 in their basement and that she wanted to know
whether we could get it tested and I called

1 Mr. Beeky. Mr. Beeky indicated to me that the
2 DEC would test it and I called Mr. Beeky and
3 Mr. Beeky indicated to me that the DEC would test
4 it and I, he is the Region 9 official, I asked
5 Mr. Beeky to inform me when the test had been
6 completed and to provide me or Mrs. Gilbert with a
7 copy of the test results as well as the person
8 whose home it is in. I haven't heard anything more.
9 I am just recounting another anecdote. I know
10 nothing of the extent to which this represents a
11 problem.

12 Finally, my final point is, I just want
13 to raise in your mind the Malcolm Pirnie report
14 again and I raise a concern. I don't know the
15 extent to which that report is important for health
16 and safety considerations. Looking at it as a lay
17 person, I am concerned about the extent to which
18 the Health Department and the DEC continues to be
19 apparently recalcitrant in preventing access to
20 dioxin contaminated materials and in committing
21 itself to begin to remediate that in this calendar
22 year and secondly, the report speaks about the
23 severe and gross contamination of the sewers and
makes a special point not to look at the lateral

sewers, the sewers going into the people's homes. I don't know whether that is a problem and I just raise it for the committee and if the committee thinks that is important for people's health and safety to have the laterals tested or evaluated or thought about, I would ask it to do that.

Finally, with respect to the Malcolm Pirnie report, in my quick look at the material made available to the committee, I noticed that the letter from Occidental's attorneys, Wald, Harkrader and Rors was left out but the material provided by their consultants who also provided apparently other consultants for the State of New York, was provided but the letter from Tom Truitt wasn't provided and I think it is important to read and I am surprised it wasn't included as part of the package. It talked about the requirements of CIRCA and it said that it did not believe that the state had adequately fulfilled its responsibilities to do adequate environmental monitoring and so, I think that Mr. Truitt's three or four page letter challenging the adequacy of the Malcolm Pirnie report should be made a part of your record so you can determine the extent of this report and

1 I wish to apologize for taking so much time and
2 once again thank you very much for letting me take
3 a second to speak.

4 DR. WELTY: One thing, in terms of our
5 consultants, I would like to request that you try
6 to retrieve the habitability charge that was sent
7 out to you initially, if you do have it, bring it
8 with you so that we can use that as a vehicle for
9 discussion tomorrow in terms of our meeting
10 tomorrow.

11 (Whereupon, the above proceedings were
12 adjourned to Thursday, May 3, 1984, commencing
13 at 9 o'clock a.m.)
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